May 22, 1945. H. G. MULLETT ET AL 2,376,551

SOAP DISPENSER

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Fig. 1

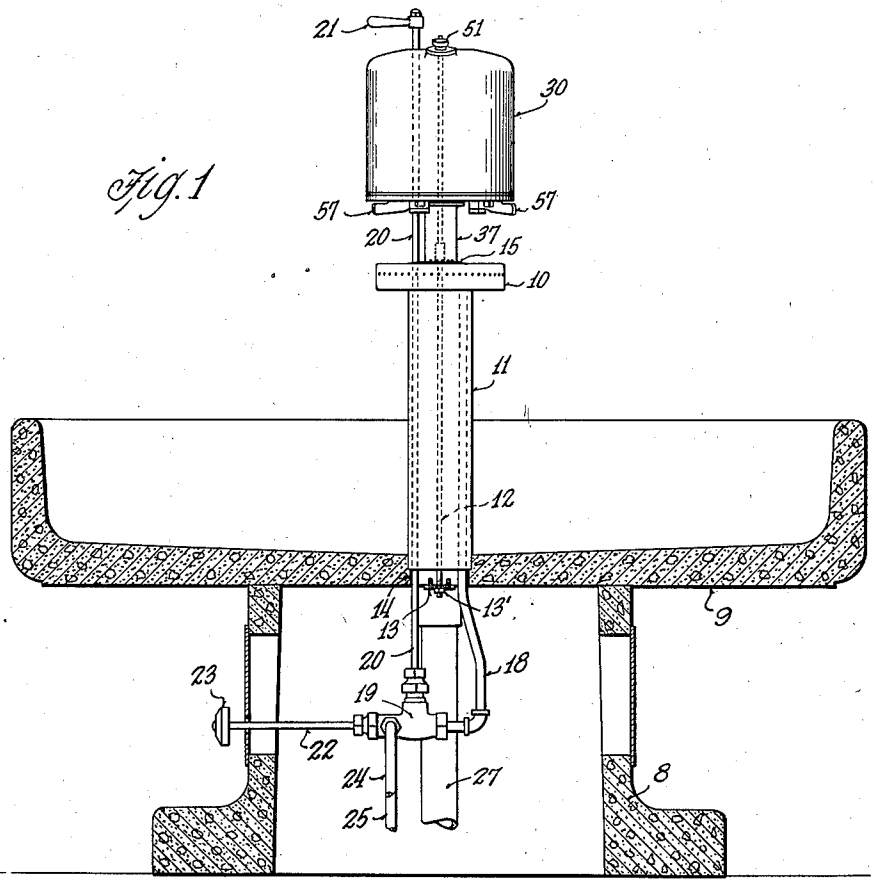
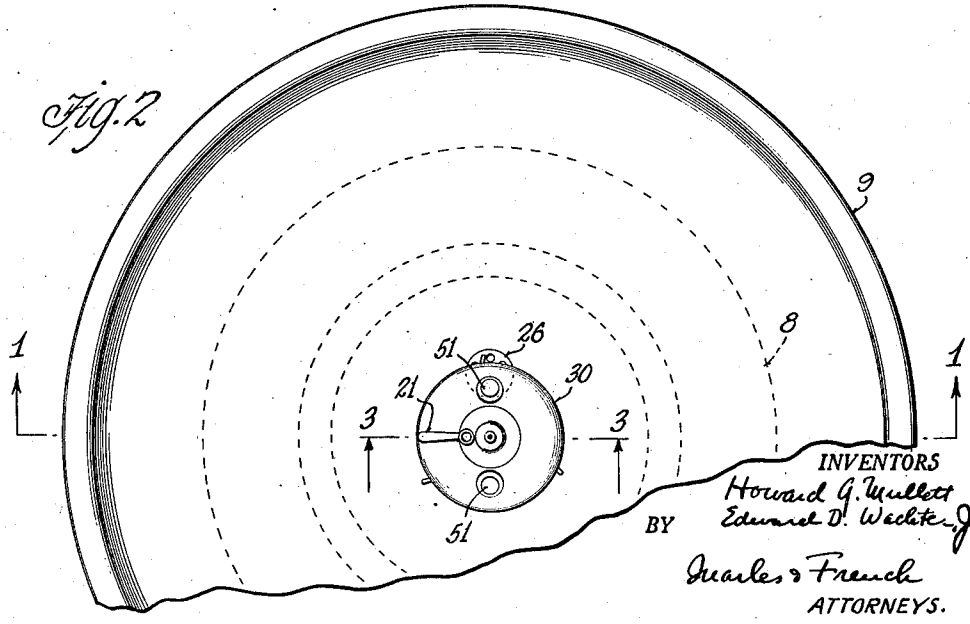


Fig. 2



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Fig. 3

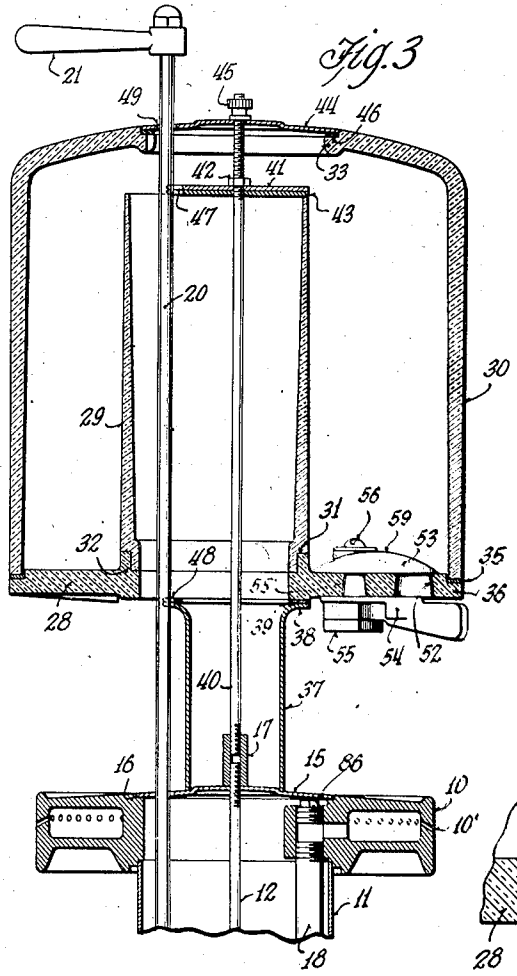


Fig. 5

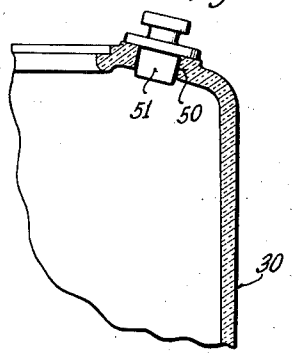


Fig. 6

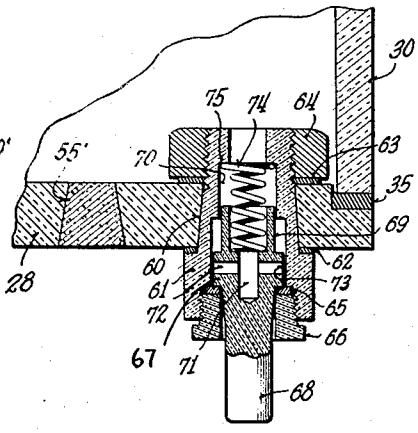
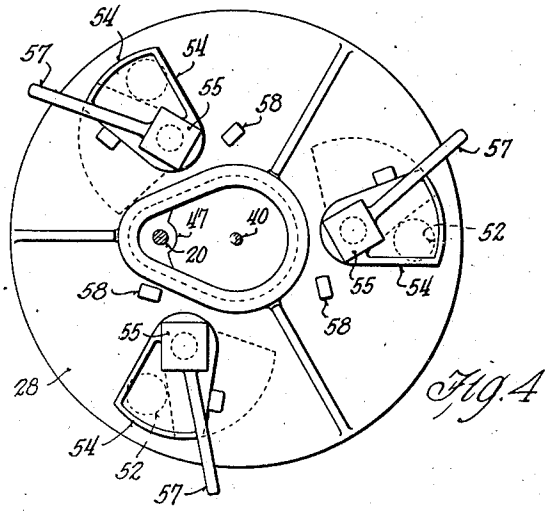


Fig. 4



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SOAP DISPENSER

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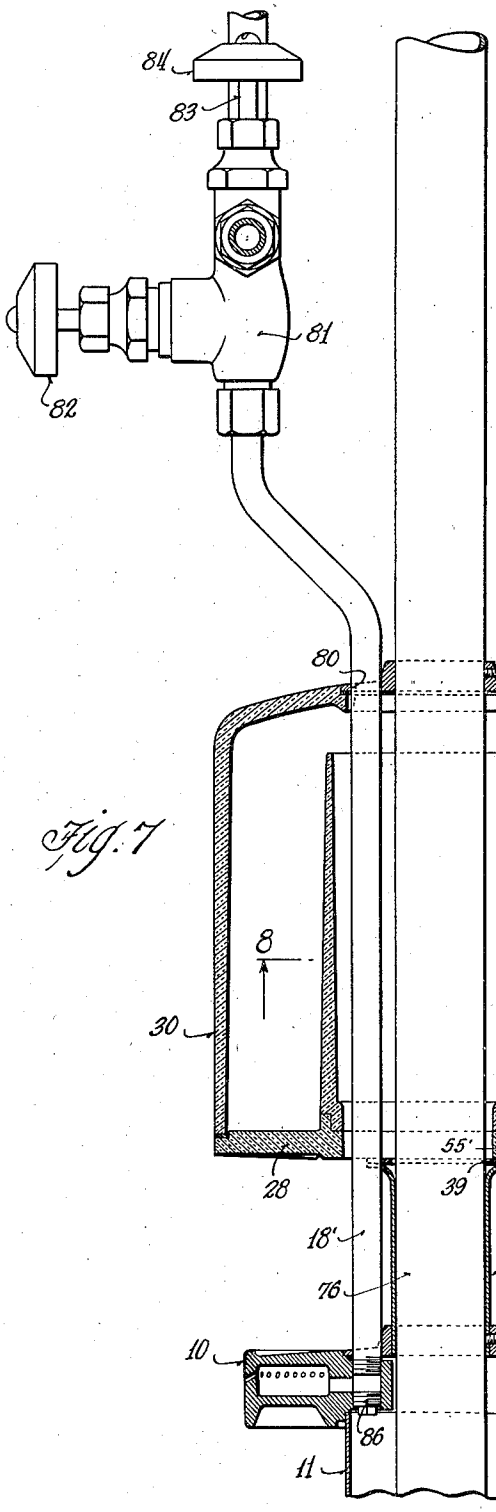


Fig. 7

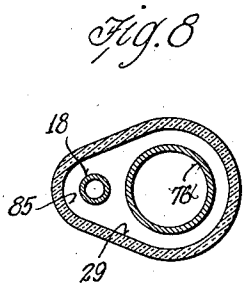


Fig. 8

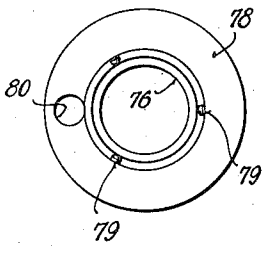


Fig. 9

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UNITED STATES PATENT OFFICE

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SOAP DISPENSER

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Application December 15, 1943, Serial No. 514,379

8 Claims. (Cl. 4—191)

The invention relates to group washfountains and more particularly to a soap dispenser for such fountains.

One object of the invention is to provide a soap dispenser that is adapted to be mounted above the spray head of the fountain.

Another object of the invention is to provide a soap dispenser of annular form, so that the fountain operating connections or water supply connection and a vent pipe, if used, may extend through the central hollow of the dispenser.

A further object of the invention is to provide a soap dispenser that is supported on the top of the spray head of the fountain and has an inner and an outer casing portion.

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 an elevation view of a soap dispenser embodying the invention mounted on a washfountain which is shown in a vertical section taken on the line 1—1 of Fig. 2;

Fig. 2 is a plan view of the soap dispenser shown in Fig. 1, parts of the fountain being broken away;

Fig. 3 is a detailed sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is a bottom plan view of the dispenser;

Fig. 5 is a detailed sectional view through one of the filling openings of the dispenser;

Fig. 6 is a detailed sectional view through the dispenser showing an alternate liquid soap dispensing valve;

Fig. 7 is a view similar to Fig. 3 showing certain modifications;

Fig. 8 is a detailed transverse sectional view taken on the line 8—8 of Fig. 7;

Fig. 9 is a detailed plan view of the upper collar and the vent pipe.

Referring to the drawings, the numeral 8 designates a pedestal, 9 a circular washbasin mounted thereon, 10 a spray head with spray openings 10', 11 a supporting member interposed between the basin and spray head which is clamped therebetween by a threaded tie bar 12 secured at its lower end to a cross bar 13 by a nut 13' and extending across the central opening 14 in said washbasin and secured at its upper end to a sheet metal plate or cap 15 which seats at its outer edges on an annular recess 16 of the spray head, the rod having a nut 17 thereon bearing against said cap 15.

Wash water is supplied to the spray head 10 from a pipe 18 connected with a volume control valve structure 19 controlled by the rod 20 and handle 21, which structure in turn is supplied with tempered water from a mixing valve (not shown in detail) operated by a rod 22 and handle 23 and controlling the supply of hot water from a pipe 24 and cold water from a pipe 25 to the fitting for the volume control or shut off valve 19. As the details of these valves are not a part of the present invention, further description is deemed unnecessary.

The basin 9 may be provided with a drain 26 offset from the opening 14 and connected with a waste pipe 27.

Referring to Figs. 3 to 5 and 7 to 9, the soap dispenser includes a container formed by a bottom plate 28, an inner casing member 29, and an outer casing member 30.

The inner casing member 29 is in the form of a substantially ovoid glass tube which is shouldered at its lower end 31 and cemented to the recessed complementary ovoid seat 32 formed in the central portion of the glass plate 28.

The outer casing member 30 is in the form of an inverted cup-shaped glass member having a central opening 33 and mounted at its lower edge 34 on an annular washer 35 on the outer edge portion 36 of the plate 28.

The bottom plate 28 is supported above the spray head by a tubular metal sleeve 37 which in Fig. 3 at its lower end rests on the plate 15 and at its upper flanged end 38 carries a washer 39 upon which the plate 28 is mounted and against which it is held by a tie rod 40 which at its lower end has threaded engagement with the nut 17 and at its upper end portion is held in engagement with a metal plate 41 by a nut 42 on said rod, said plate bearing on a gasket 43 that engages the upper end of the tube 29. In Fig. 7, where a vent pipe 76 is used, the metal sleeve 37 at its lower end fits in the bore of a plate or collar 15' to which it is secured by set screws 77 and at its upper flanged end 38 carries a washer 39 upon which the plate 28 is mounted and against which it is held by a collar 78 seating on the recessed portion of the opening 33 of the member 30 and secured by set screws 79 to said vent pipe 76.

The outer casing member 30 in Fig. 3 is held in position on the bottom plate by a cap 44 which seats over its opening 33 and is engaged by a clamping nut 45 that is mounted on the extended end of the rod 40, a gasket 46 being interposed between said plate and casing.

The plate 41 and gasket 43 are notched as indicated at 47 as is also the flange 38 and washer

39 as indicated at 48 to provide clearance for the rod 20 in Fig. 3 which adjacent its upper end passes through a hole 49 in the cover or cap 44 so that the handle 21 is accessible from above the cap. In Fig. 7 the notch 48 provides clearance for the overhead water supply pipe 18' which passes through an opening 80 in the collar 78. In Fig. 7 it will be noted that the volume of the supply is regulated by a valve 81 controlled by a handle 82 and that the proportion of hot and cold water is controlled by a mixture regulating valve, not shown in detail, having a stem 83 and operating handle 84.

The casing 30 has one or more filling openings 50, each closed by a glass stopper 51, as shown in Fig. 5.

Where the dispenser is used for dispensing powdered soap, the bottom plate 28 is provided with three openings 52 spaced one hundred twenty degrees apart and each having a valve structure associated therewith. Each valve structure includes a rotary top plate 53 and a rotary bottom plate 54 which plates are connected together by a bolt 55 and a clamping screw 56. The plate 54 has a handle extension 57, and this plate and the plate 53 are arranged to partially overlap each other, as shown in Fig. 4, so that when the lower plate 54 has closed off the opening 52, the upper plate will be uncovering said opening, so that a charge of soap equal to the volume of the opening 52 in the plate 28 may lodge in said opening and be delivered therefrom by gravity when the plate 54 is swung to open position, which brings it against the stop 58 and also moves the top plate 53 over said opening 52 to prevent further feed of soap until the parts are moved back to their initial position.

In order to assist in the feeding of the powdered soap, the top of the plate 53 has an arcuate or curved form as shown at 59 in Fig. 3, so that as said plate is moved to open or closed position, it agitates the soap particles surrounding it, so that they will be prevented from caking or sticking together and feeding properly through said opening 52.

Where liquid soap is used, the bottom plate 28 has holes 55' for the bolts 55 plugged up as indicated in Fig. 6, and openings 52 are each adapted to receive a dispenser valve of any suitable construction and one form of which is shown in Fig. 6. This valve comprises a tubular plastic housing 61 secured in fluid-tight manner to the bottom plate as by the gaskets 62 and 63 and the clamping nut 64, a valve seat 65 secured to one end of said housing by a plastic sleeve nut 66 and a plastic plunger 67 having an operating stem 68. The plunger 67 has a valve head which seats on the seat 65 and has a throttling sleeve portion 69 that works in a bore 70 in the housing 61, the interior of said sleeve communicating with the seat through a vertical hole 71 and a transverse hole 72 communicating with the bore 73 adjacent said seat. The valve 67 is normally held in closed position by a spring 74 interposed between a shoulder 75 on the housing 61 and the base of the sleeve 69. With this construction, inward movement of the valve 67 causes the valve head to displace a certain amount of liquid soap which flows from the container through the upper portion of the housing 61, passages 71 and 72, bore 73 past the seat 65 and through the opening between nut 66 and the stem 68 of the valve and into the operator's hand.

Thus the dispenser may be adapted for use with either powdered or liquid soap and with three equally spaced dispensing stations, it does not make any difference from what angle a bather may approach the fountain he will always find a soap valve within convenient reach of him at his position adjacent the side of the basin 9.

In some group washfountains the supply of water comes in from above instead of below, in which case the pipe 18 projects down from above and passes through the hollow of the inner wall portion of the soap dispenser container, as shown in Fig. 7 of the drawings. In this form it will be noted that the shut-off valve 81 and the mixture control valve with its control handle 84 is situated above the top of the soap dispenser and that the dispenser container is so turned relative to the spray head as to bring the apex portion 85 of the ovoid wall portion formed by the part 29 so as to line up this apex portion with the opening in the upper part of the spray head 10, which as shown in Fig. 3 is normally closed by a plug 86.

From the above it will be noted that the soap dispenser is of a structure which may be used with washfountains having the water supply coming from above or below and with or without a vent pipe without any special change of the container, and this is of commercial advantage as it involves the storage of only one set of main parts for all fountains of the above mentioned types.

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

What we claim as our invention is:

1. In a washfountain having a group wash basin and a spray head supported above the bottom of the basin to deliver water toward the side of said basin, the combination of a soap dispenser mounted above said spray head and having a container provided with an inner ovoid walled portion and a top, control means for water delivered to said spray head including an operating member extending above said spray head through the hollow of said container and an opening in said top, and dispensing valves mounted in the bottom of said container.

2. In a washfountain having a group wash basin and a spray head supported above the bottom of the basin to deliver water toward the side of said basin, the combination of a soap dispenser having a container provided with an inner ovoid wall portion and a top apertured to aline with the apex portion of said ovoid wall, valves for controlling the dispensing of soap from said container, and means for supporting said dispenser above said spray head.

3. In a washfountain having a wash basin and a spray head supported above the basin to deliver water toward the side of said basin, the combination of a soap dispenser having a container portion provided with a base and a central hollow wall portion and an outer casing member, means engaging said hollow walled portion to clamp the same and said base in position above said spray head, and means for detachably clamping said outer casing member to said base.

4. In a washfountain having a wash basin and a spray head supported above the basin to deliver water toward the side of said basin, the combination of a soap dispenser having a container provided with an outer separate casing portion and an inner ovoid casing portion, means for securing said parts in assembled relation, and means for supporting said dispenser above said spray head.

5. In a washfountain having a wash basin and a spray head supported above the basin to deliver water toward the side of said basin, the combination of a soap dispenser provided with a base, an inner ovoid tubular portion integrally connected to said base, and an outer inverted cup-shaped casing member having its lower edge mounted on said base, means engaging said inner casing portion to clamp said base in position above said spray head, and an extension of said last named means for detachably clamping said outer casing member to said base.

6. A soap dispenser for washfountains comprising a container of translucent material having a base with a centrally disposed tubular portion projecting upwardly therefrom, an inverted cup-shaped casing member of translucent material having its lower edge mounted on said base, and means, distinct from said tubular portion, for holding said base and said member in assembled relation.

7. A soap dispenser for washfountains comprising a container having a base with a centrally disposed tubular portion projecting upwardly therefrom, a centrally apertured inverted cup-shaped casing member having its lower edge mounted on said base, an upright member, distinct from said tubular portion, extending through the hollow of said tubular portion, and means secured to said upright and holding said base and member in assembled relation.

8. In a washfountain having a wash basin, a spray head supported above the basin to deliver water toward the side of said basin, a drain, and a vent pipe for said drain extending upwardly from the basin through a hollow in the spray head, the combination of a soap dispenser having a container mounted above and supported by said spray head and provided with a central hollow walled portion through which said vent pipe extends and an outer walled portion for said container, and a collar mounted on said vent pipe and securing said outer walled portion in assembled relation.

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