

- [54] **SHOWER EQUIPMENT WITH LIQUID DISPENSER FOR SHOWER HEAD**
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- [22] Filed: **Apr. 12, 1974**
- [21] Appl. No.: **460,368**

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Related U.S. Application Data

- [63] Continuation-in-part of Ser. No. 329,714, Feb. 5, 1973, abandoned.
- [52] U.S. Cl. **239/314; 239/432; 239/521; 239/524; 239/418**
- [51] Int. Cl.²
- [58] **Field of Search** **239/310, 313, 314, 315, 239/316, 432, 418, 318, 521-524**

Primary Examiner—Robert S. Ward, Jr.
Attorney, Agent, or Firm—Kolisch, Hartwell, Dickinson & Stuart

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ABSTRACT

Apparatus for dispensing liquid soap or other water additive into the water ejected from a shower head. The apparatus may include a supply unit for holding a stored supply of soap normally mounted in the shower stall area. A conduit connects this supply unit to a mixer unit which is mounted on the shower head.

4 Claims, 5 Drawing Figures

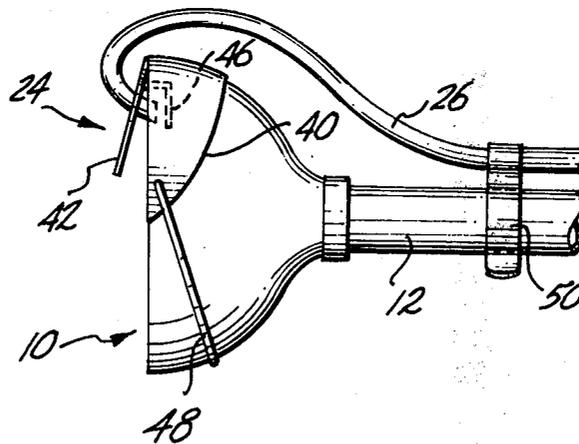


Fig. 2.

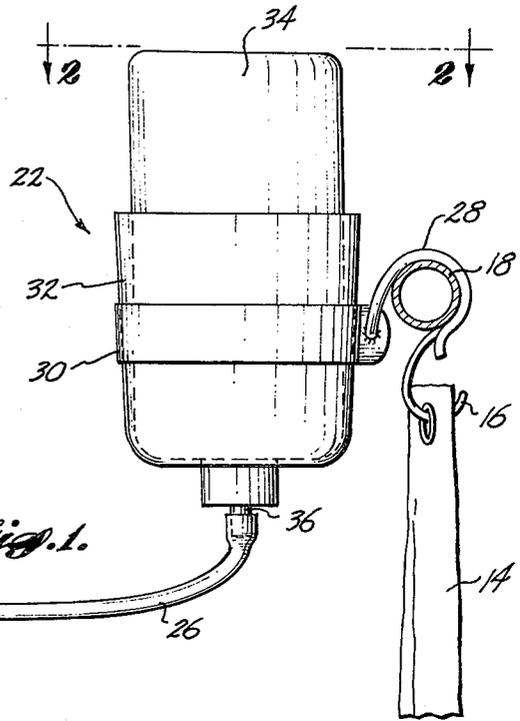
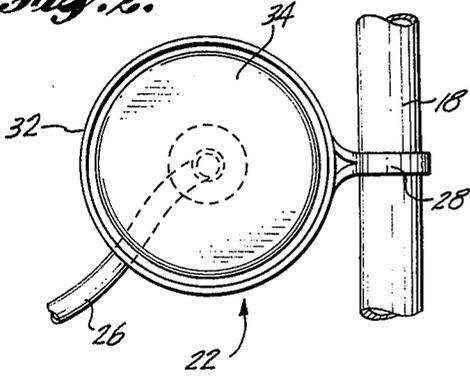


Fig. 1.

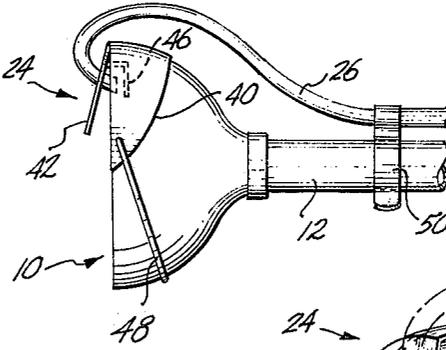
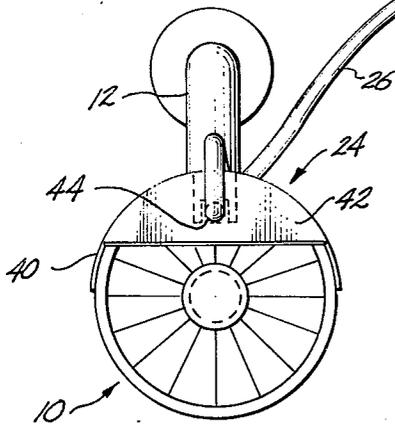


Fig. 3.

Fig. 4.

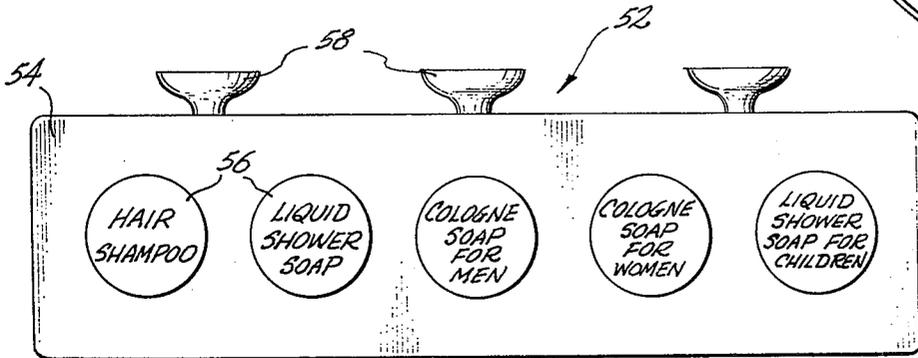
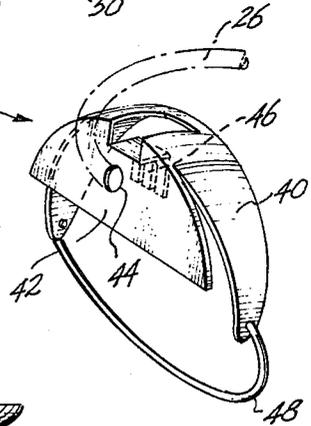


Fig. 5.

SHOWER EQUIPMENT WITH LIQUID DISPENSER FOR SHOWER HEAD

This application is a continuation-in-part of prior filed application entitled "Liquid Soap Shower Dispenser and Boutique", filed Feb. 5, 1973, Ser. No. 329,714, now abandoned.

This invention relates generally to shower equipment, and more particularly to apparatus for introducing soap or other liquid additive such as cologne, into the water ejected by a shower head.

A principal object of the invention, therefore, is to provide shower equipment which includes means for introducing liquid soap and the like into the water spray of a shower whereby such is carried by the water onto the person taking the shower.

The apparatus when used in the dispensing of soap permits the person taking the shower to clean himself without the use of bar soap and the like, which is easy to drop, and which must be stored on a shelf or the like when not in use.

Another object of the invention is to provide such shower equipment wherein dispensing may be selectively controlled by the user.

Another object of the invention is to provide such shower equipment wherein the type of soap or other material (such as cologne) which is dispensed at any given time may be easily changed to suit the preference of the user.

Yet another object is to provide dispensing apparatus for soap and the like which is easily installed on existing showers.

These and other objects and advantages will become more fully apparent from a reading of the following description taking into conjunction with the accompanying drawings, wherein:

FIG. 1 is a side elevation view of portions of a shower stall equipped with dispensing apparatus as contemplated herein;

FIG. 2 is a top view taken generally along a line 2—2 in FIG. 1 illustrating details of a supply unit in the apparatus;

FIG. 3 is a side view of the shower head shown in FIG. 1 having a mixer unit as contemplated herein mounted on the head;

FIG. 4 is a perspective view of a mixer unit in the apparatus; and

FIG. 5 is a top view of a boutique which may be used in the storing of different soaps, colognes, or other liquid additives employed in the equipment of the invention.

Referring now to the drawings, illustrated in FIG. 1 are portions of a shower stall, including a shower head 10, and a water supply pipe 12 on which the head is mounted which supplies the water ejected by the head. A shower curtain 14 is provided for closing off the shower stall, such being dependently supported through hooks 16 on a shower rod 18.

The dispensing apparatus which is included in the shower equipment comprises a supply unit generally shown at 22, a mixing means or unit, generally designated at 24, and a tube or conduit 26 of rubber, plastic, or other elastomer interconnecting these units.

Considering initially supply unit 22, such is generally mounted in the shower stall at a suitable elevation whereby liquid soap or other additive may flow from the supply unit through tube 26 to the mixing unit. In

the specific form of the invention shown in FIG. 1, the supply unit is supported on shower rod 18 through a clip 28 integrally joined to a bracket 30 in the supply unit. Bracket 30 supports a holder 32 receiving an inverted squeeze bottle 34 containing the soap, cologne, or other liquid additive to be mixed with the shower water. Extending from the cap of the squeeze bottle is a hollow stem 36 which has one end of tube 26 snugly fitted thereover.

Mixing unit 24 includes a mounting or lip portion 40 of arcuate side profile whereby the same fits snugly over the top of the shower head 10. Joined to lip portion is a downwardly depending shield 42 which with the unit mounted in place is spaced forwardly of the shower head, whereby some of the water ejected from the head impinges on the shield. The shield may extend downwardly at a slight angle as shown in FIG. 3, and typically may extend downwardly over approximately one-third of the face of the shower head. The shield functions to divert water and soap downwardly into the jets of water ejected from the head below the shield. Approximately midway between the sides of the shield is a hole or aperture 44, into which is snugly inserted the opposite end of tube 26.

Disposed rearwardly of the shield and in advance of the face of the shower head is a diffuser 46 which may take the form of a depending forked tongue joined at its upper extremity to the shield 42. The diffuser as shown in FIG. 3 is directly in front of the open end of tube 26, whereby material leaving the tube tends to be thrown on the diffuser thence to be washed from the diffuser by the water coming from the shower head in a mixing operation.

The mixing unit may be secured to the shower head as with an elastic band 48 extending from lip portion 40 and around the base of the shower head. Tube 26 may follow the supply of pipe 12, and is shown clipped to the pipe as by clip 50.

Illustrated at 52 in FIG. 5 is a boutique in the form of a platform 54 with holes or apertures 56 therein adapted to receive the neck portions of bottles containing other types of soaps, colognes, or liquid additives. The boutique may be secured to the side of the shower stall using suction cups 58 held below the platform and projecting to one side thereof.

Using the shower equipment described, the user of the shower may squeeze the upper exposed region of the squeeze bottle in supply unit 22 to cause material to move out of the tube 26 and against the diffuser 46. Such soap or other liquid additive then mixes with the water ejected from the shower head to be carried with such water onto the person taking the shower. Dispensing of the soap is readily controlled by varying the frequency and degree of force with which the squeeze bottle is manipulated.

When it is desired to change the material being dispensed it is an easy matter to remove the tube 26 from the stem which extends from the base of the squeeze bottle and replace the squeeze bottle in the supply unit with one of the bottles stored in boutique 52.

While a specific embodiment of the invention has been described, obviously changes and variations are possible as would be apparent to one skilled in the art.

It is claimed and desired to secure by Letters Patent: 1. The combination of a shower head for ejecting shower water and a water supply therefor,

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mixer means for mixing a liquid water additive into the water ejected by the shower head, said mixer means comprising a shield disposed in advance of said shower head against which at least a portion of the water ejected from said head impinges, and a diffuser element disposed behind said shield and in advance of said shower head for diffusing liquid composition leaving said conduit,
 a supply unit for holding a stored supply of said liquid additive, and
 a conduit connecting said supply unit and said mixer means.

2. The combination of claim 1, wherein said mixer means further comprising a mounting portion mounting the mixer means on said shower head.

3. Dispensing apparatus for dispensing liquid soap and the like into the water ejected from a shower head comprising

a bottle holder adapted to support a bottle in an inverted position,
 a conduit having an end adapted to connect to the base of a bottle disposed in said holder, and
 a mixer unit for mixing the soap with water ejected from said head, said mixer unit including a mount-

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ing portion for mounting the unit on a shower head, a shield adapted to be positioned in advance of the shower head whereby water ejected from the shower head impinges on the shield, and a diffuser element adjacent said shield and located behind the shield, said shield including means for mounting the other end of said conduit.

4. The combination of a shower head for ejecting shower water and a water supply therefor,

mixer means for mixing a liquid water additive into the water ejected by the shower head, said mixer means comprising a stationary shield disposed in advance of said shower head against which at least a portion of the water ejected from said head impinges,

a supply unit for holding a stored supply of said liquid additive, and

a conduit with one end connecting with said supply unit and a discharge end connecting with said mixer means, said discharge end being mounted on said shield and communicating with a region disposed behind said shield and in advance of said shower head.

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