May 28, 1963 H. V. PALMER 3,091,402

TOILETRIES DISPENSER FOR SHOWER

Filed April 17, 1962 2 Sheets-Sheet 1

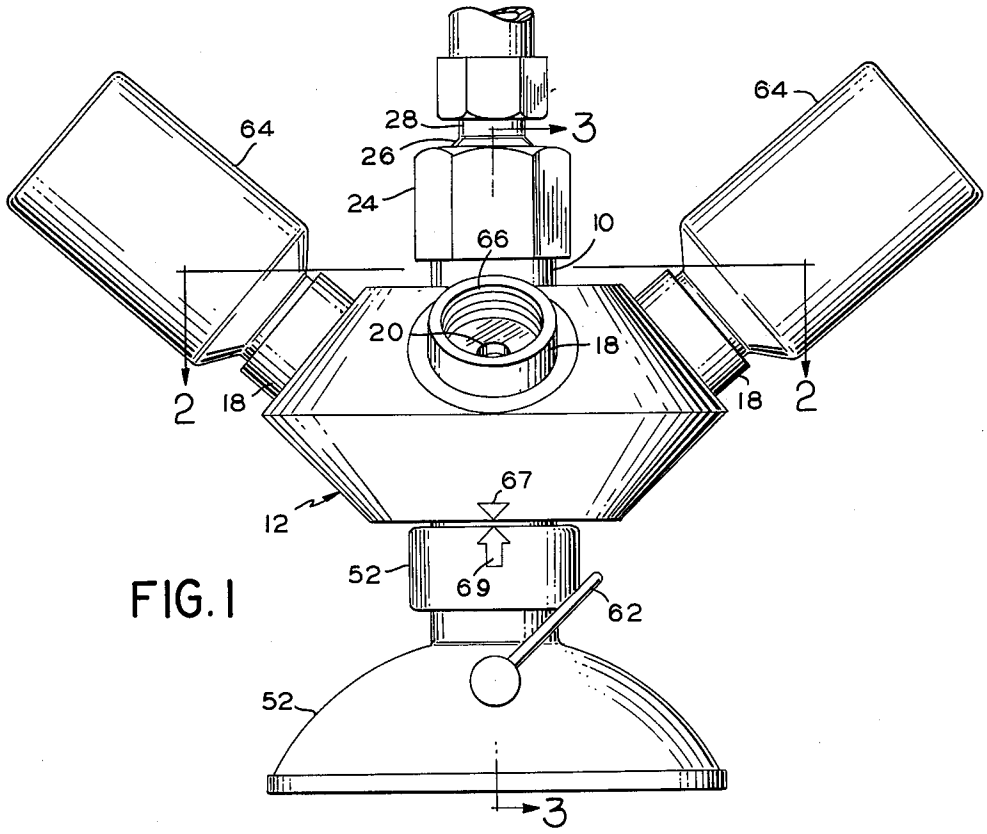

FIG. 1

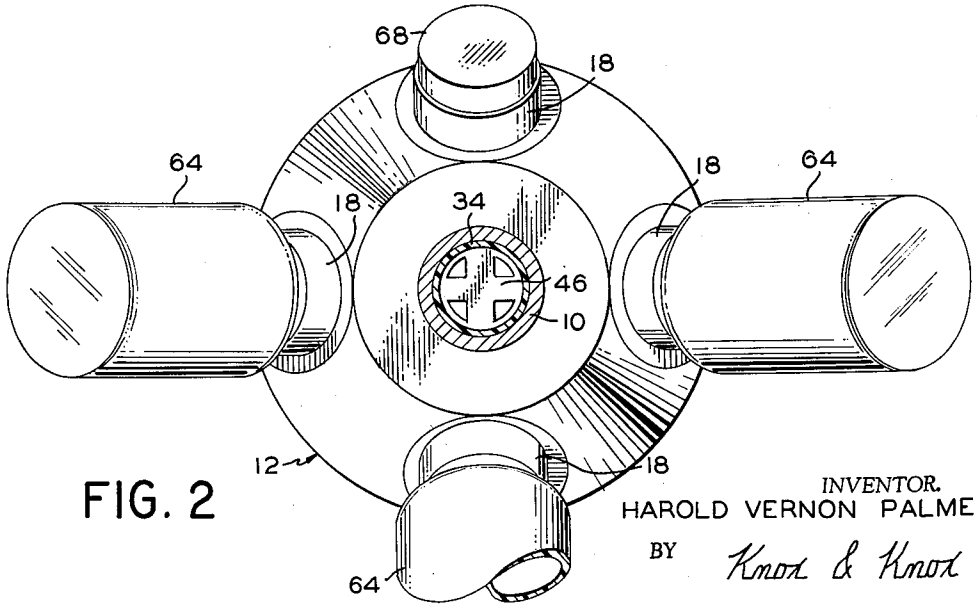

FIG. 2

INVENTOR.
HAROLD VERNON PALMER
BY Knox & Knox

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TOILETRIES DISPENSER FOR SHOWER

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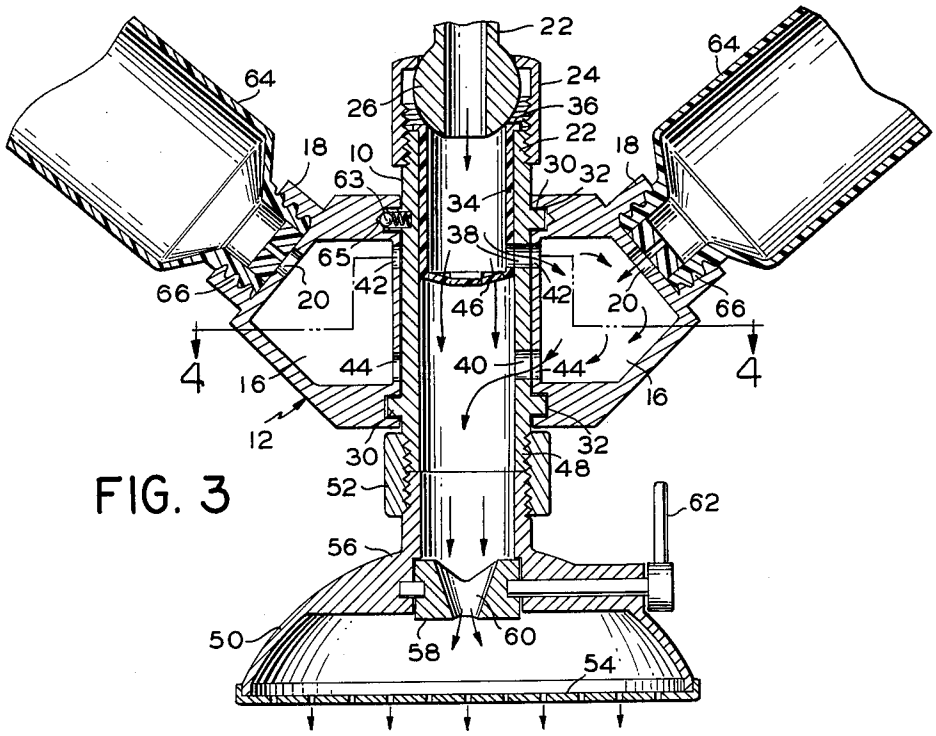

FIG. 3

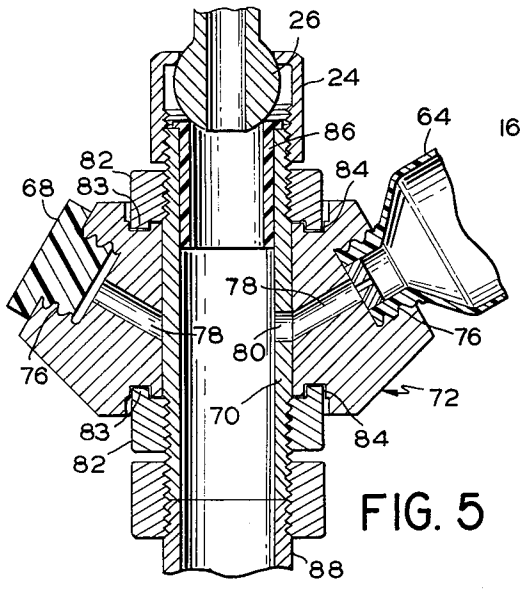

FIG. 5

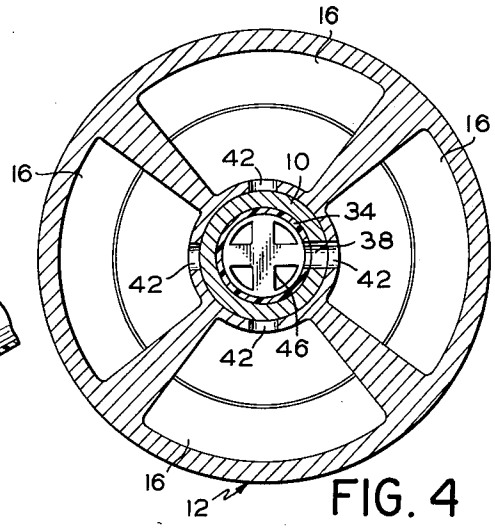

FIG. 4

INVENTOR.
HAROLD VERNON PALMER
BY Knox & Knox

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TOILETRIES DISPENSER FOR SHOWER

Harold Vernon Palmer, 6192 La Jolla Mesa Drive, La Jolla, Calif.

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9 Claims. (Cl. 239—315)

The present invention relates generally to bathroom fixtures and more particularly to a toiletries dispenser for a shower.

The primary object of this invention is to provide a toletries dispenser for attachment between the water pipe and shower head of a shower, in which a rotatable turret type holder carries containers of various toiletries which may be selectively added to the flow of water from the shower in any desired amounts.

Another object of this invention is to provide a toiletries dispenser in which the rotatable holder contains an individual mixing chamber for each substance to ensure proper mixing with the water, yet prevent undesirable intermixing of the various toletries.

Another object of this invention is to proivde a toiletries dispenser having valve means to control the total volume of flow.

A further object of this invention is to provide a toiletries dispenser which is capable of handling liquid, gelatinous, solid, gaseous, or even pressurized toilet substances.

Finally, it is an object to provide a toiletries dispenser of the aforementioned character which is simple and convenient to manufacture and use and which will give generally efficient and durable service.

With these and other objects definitely in view, this invention consists in the novel construction, combination, and arrangement of elements and portions, as will be hereinafter fully described in the specification, particularly pointed out in the claims, and illustrated in the drawings which form a material part of this disclosure, and in which:

FIGURE 1 is a side elevation view of the complete dispenser;

FIGURE 2 is a sectional view taken on line 2—2 of FIGURE 1;

FIGURE 3 is a sectional view taken on line 3—3 of FIGURE 1;

FIGURE 4 is a sectional view taken on line 4—4 of FIGURE 3; and

FIGURE 5 is a sectional view, similar to FIGURE 4, of a modified form of the dispenser.

Construction

Referring now to FIGURES 1–4 of the drawings, the unit comprises a cylindrical barrel **10** on which is mounted an axially rotatable body or turret **12** containing a plurality of mixing chambers **16** and having an upwardly and outwardly inclined holder socket portion **18** communicating with each mixing chamber through an injection port **20**, as in FIGURE 3. The barrel **10** has a threaded upper end **22** to receive a clamp nut **24**, which is attached to the ball end **26** of a water supply pipe **28**, as for a conventional adjustable shower head connection. A direct, non-swivelling connection may also be made if adjustability is not needed.

The barrel **10** has a pair of spaced radially projecting rings **30** which fit into corresponding grooves **32** in turret **12** to hold the turret against axial displacement, the ring and groove structure also assisting in sealing the rotary connection against leakage.

In the upper end of barrel **10** is a tightly fitting sleeve **34**, of plastic or the like, said sleeve having a flange **36** which rests on the end of said barrel and provides a

smoothly swivelling seat for the ball end **26**. Immediately below the upper ring **30** is a bypass port **38** through the barrel **10** and sleeve **34**, and spaced axially therefrom is a return port **40** in the barrel. Each mixing chamber **16** has an inlet port **42** and outlet port **44** spaced for alignment with the bypass port **38** and return port **40**, respectively. The lower end of sleeve **34** has a perforated baffle portion **46** which obstructs the flow of water and causes a portion of the flow to be diverted through the bypass port **38**, into the mixing chamber **16** aligned therewith, and back into the barrel **10** through return port **40**.

The lower end of barrel **10** has a threaded portion **48**, to which a shower head **50** is attached by means of a connecting collar **52**. Shower head **50** is of domed configuration and has a lower perforated plate **54** through which water is distributed. In the upper, neck portion **56** of shower head **50** is a valve **58**, illustrated as a rotatable drum element with a tapered flow passage **60**, said valve being operable by means of a suitable handle **62** to control the flow of water into the shower head. This valve structure assures confluence and proper mixing of the toiletries with the water. Other types of valves may be used to suit the size and shape of shower head and the degree of flow control desired.

Each of the socket portions **18** can hold a container **64** of toilet substance, those illustrated being of the plastic squeeze bottle type and said socket portions having screw threads **66** to fit the necks of said containers. It should be understood, however, that various containers and securing means may be used, the screw-in type squeeze bottle merely being a convenient example. If a certain socket portion **18** is not used for toiletries, the respective socket portion can be sealed by a simple blanking cap **68**, as in FIGURE 2.

Use of the Dispenser

The dispenser can be loaded with containers of various toiletries, such as soaps, perfumes, deodorants, skin treatments products and the like, in the form of liquid, paste or gelatinous material, powder, or any form which can be injected into the mixing chamber and be dissolved in or mixed with the water. The containers **64** may be plastic bottles, as illustrated, collapsible tubes, or even aerosol type cans, from which the substances can be ejected. The turret **12** is rotated so that the mixing chamber **16** having the socket portion **18** carrying the required substance is aligned with the ports in the barrel **10**. To ensure proper alignment of the ports of the barrel **10** and mixing chamber **16**, the barrel **10** contains a spring loaded detent **63** which registers with suitably position indexing sockets **65** in the turret **12**, as in FIGURE 3. In addition, the turret **12** may be provided with markers **67** which can be registered with a fixed reference marker **69** on the connecting collar **52**, or some other convenient portion, as in FIGURE 1, to show which toiletry substance is in position for use.

Water passing through the barrel **10** from supply pipe **28** will be partially diverted through the selected mixing chamber **16**, the flow being indicated by directional arrows in FIGURE **3**. This will in no way interfere with normal shower use. When the toilet substance is needed, the appropriate container **64** is squeezed, or otherwise actuated, to dispense the substance through the injection port **20** into the mixing chamber **16** in any required quantity. Water circulation through the mixing chamber provides a good mixing and combination of the injected substance with the water. The mixture returns to the main flow in barrel **10** through the aligned outlet port **44** and return port **40** and is ejected from the shower head **50**. Applications of any particular substance can be repeated

as needed, or the turret **12** can be easily turned to select other toiletries. Flow can be controlled by the valve **58**, allowing the water temperature to be pre-adjusted by the usual hot and cold faucets and maintained, regardless of volume of flow.

Simplified Structure

A simplified form of the dispenser is illustrated in FIGURE 5, in which the barrel **70** is a plain cylindrical element and the turret **72** has threaded holder sockets **76** with injection ports **78** leading directly to the barrel **70**, said barrel having a single inlet port **80** with which said injection ports can be selectively aligned by rotating the turret. The turret **72** is held between upper and lower retaining nuts **82** threaded on barrel **70**, said retaining nuts having annular ribs **83** which seat in grooves **84** in the turret for compactness and to improve sealing.

The upper end of barrel **70** contains an open ended sleeve **86** providing a seat for the water pipe ball end **26**, and is held in place by clamp nut **24** as previously described. The lower end of barrel **70** is fitted with a connecting collar **52** for attachment of a shower head, indicated fragmentarily at **88**, which may be of conventional type, or fitted with a flow control valve as in shower head **50**.

The sockets **76** hold containers **64** or may be closed by blanking caps **68**, as required, the selected toiletry being injected directly into the water stream in the barrel **70**. With many easily soluble substances sufficient mixing will occur in the shower head.

The dispenser is adaptable to existing plumbing and may be added to virtually any shower outlet. Dispensation of toiletries is controlled and readily selective. When not needed, the turret can be turned slightly so that none of the ports from the toiletry containers are in communication with the water flow, thus avoiding possible back-up of water into the containers.

The dispenser is neat in appearance and serves as a convenient storage for toiletries, since the individual containers are easily removed for use other than in conjunction with the shower. The turret body can be constructed to hold any desired number of containers, the arrangement of four as illustrated being merely an example.

It is understood that minor variation from the form of the invention disclosed herein may be made without departure from the spirit and scope of the invention, and that the specification and drawing are to be considered as merely illustrative rather than limiting.

I claim:

1. A toiletries dispenser for a shower, comprising:
a substantially cylindrical water conducting barrel having means at one end thereof for attachment to the water supply pipe of a shower and outlet means at the other end;
a turret axially rotatably mounted on said barrel and having a plurality of holder portions each to receive and hold a closed container of toiletry substance;
said barrel having an inlet port;
and ports in said turret communicating from said holder portions to said barrel for selective alignment with said inlet port by rotation of said turret, whereby toiletry substance may be selectively dispensed to enter the water conducting barrel intermediate the ends thereof.

2. A toiletries dispenser according to claim 1 and including a shower head fixed directly to the other end of said barrel.

3. A toiletries dispenser for a shower, comprising:
a substantially cylindrical water conducting barrel having means at one end thereof for attachment to the water supply pipe of a shower;
a turret axially rotatably mounted on said barrel and having a plurality of holder portions each to receive and hold a container of toiletry substance;
said turret having mixing chambers therein and an injection port from each mixing chamber to one of said holder portions;
said barrel having a bypass port, and a return port longitudinally spaced therefrom;
each of said mixing chambers having an inlet port and an outlet port corresponding to said bypass port and said return port selectively, and for selective alignment therewith by rotation of said turret, whereby water may be bypassed from said barrel through said mixing chambers individually.

4. A toiletries dispenser for a shower, comprising:
a substantially cylindrical water conducting barrel having means at one end thereof for attachment to the water supply pipe of a shower;
a turret axially rotatably mounted on said barrel and having a plurality of holder portions each to receive and hold a container of toiletry substance;
said turret having mixing chambers therein and an injection port from each mixing chamber to one of said holder portions;
said barrel having a bypass port, and a return port longitudinally spaced therefrom;
baffle means in said barrel adjacent said bypass port to divert a portion of the water in said barrel through the bypass port;
each of said mixing chambers having an inlet port and an outlet port corresponding to said bypass port and said return port selectively, and for selective alignment therewith by rotation of said turret, whereby water may be bypassed from said barrel through said mixing chambers individually.

5. A toiletries dispenser according to claim 4 and including a shower head operatively connected on the other end of said barrel;
said shower head having a flow control valve adjustable to control the total flow therethrough.

6. A toiletries dispenser according to claim 5 wherein said valve comprises a rotatable drum valve element having a tapered flow passage to assure confluence and mixing of the toiletries and water.

7. A toiletries dispenser according to claim 5 wherein said barrel and shower head are in relatively fixed relation while said turret is shiftable relative thereto.

8. A toiletries dispenser for a shower, comprising:
a substantially cylindrical water conducting barrel having means at one end thereof for attachment to the water supply of a shower and outlet means at the other end;
a turret axially rotatably mounted on said barrel and having a plurality of holder portions;
a dispensing container removably secured to each holder portion;
said barrel having an inlet port;
and ports in said turret communicating from said holder portions to said barrel for selective alignment with said inlet port by rotation of said turret, whereby toiletry substance may be selectively dispensed to enter the water conducting barrel intermediate the ends thereof.

9. A toiletries dispenser for a shower, comprising:
a substantially cylindrical water conducting barrel having means at one end thereof for attachment to the water supply pipe of a shower and outlet means at the other end;
a turret axially rotatably mounted on said barrel and having a plurality of holder portions;
a dispensing container removably secured to each holder portion;
said turret having mixing chambers therein and an injection port from each mixing chamber to one of said holder portions;
said barrel having a bypass port, and a return port longitudinally spaced therefrom;
each of said mixing chambers having an inlet port corresponding to said bypass port and said return port

selectively, and for selective alignment therewith by rotation of said turret, whereby water may be bypassed from said barrel through said mixing chambers individually.

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