SOAP DISPENSING MEANS
10 Claims, 9 Drawing Figs.

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ABSTRACT: A manually engageable and operable valve-controlled irrigating unit for bathers connected with a supply of water and a supply of liquid soap by an elongate flexible water hose and an elongate flexible soap tube and including a jet pump means and manually operable air and soap control valvings means operable to effect the constant discharge of water, the constant discharge of aerated water, the thumb-controlled selective discharge of water or aerated water, the constant discharge of air, soap and water, the thumb-controlled selective discharge of air, soap and water or soap and water and the constant discharge of soap and water.
This invention has to do with an improved soap and water mixing and dispensing means for use in shower baths and the like.

There is an ever-increasing recognition of a need for and increased use of soap and water mixing means in combination with manually engageable bathing brushes, sponges and the like.

The structures provided by the prior art to satisfy the noted need characteristic include an elongate flexible water hose engageable with the water supply pipe normally provided above and at one end of a bathing tub to connect with a showerhead. The inlet end of the hose connects with the noted pipe and replaces the showerhead or connects with a T-fitting engaged between the pipe and showerhead and which is provided with a cock-type valve to selectively direct water through the head or through the hose. The prior art structures next include a container of liquid soap concentrate fixed to or otherwise directly related to and carried by the T-fitting or pipe to occur above the tub, a flexible soap conducting tube extending longitudinally of the hose and having an extension at its upper or inlet end, entering the container and terminating in the lower or outlet end thereof. The prior art structure next includes a manually engageable wand with a jet pump means within connected with the lower outlet end of the hose and tube and having a discharge end connected with a suitable dispensing head, such as a spray head or a washing sponge or bathing brush with suitable irrigating means incorporated therein to receive and dispense the water or a mixture of water and soap issuing from the wand into and through the sponge or brush.

The structures provided by the prior art and such as are referred to above are normally provided with and are characterized by a valve port in the jet pump means and over which the operator or bather's thumb or a suitable finger can be engaged to selectively establish or break the suction or vacuum effect of the jet pump means within the wand and thereby selectively stop and start the flow of soap through the structures.

When the valve ports of such structures are open, air is drawn into the wand and the discharged water is aerated to provide an extremely pleasant and soothing flow of water for the bather.

One of the principle shortcomings found in structures of the character referred to and which are provided by the prior art resides in the fact that once soap has been caused to flow through the soap tubes and said tubes are filled with soap, the soap continues to flow through the tubes as a result of the siphon effect established by the structure and so that when the valve port is open, the flow of soap is reduced, but is not stopped. As a result of the above, the bather cannot rinse off properly and when he has finished bathing, the structure must be disconnected or the wand must be elevated and supported at a level above the soap container to stop the flow and loss of soap.

Attempts to prevent the above-noted siphoning of soap have included the inclusion of check valves and the like, but such attempts have proven to be wanting in one or more respects. The principle shortcomings found in the provision of check valves and those other means provided by the prior art to overcome the siphoning of soap through the soap tubes, when the flow of soap is sought to be stopped, has been the tendency for the means provided to become plugged or stopped up with soap and rendered ineffective and the tendency of such means to require a relatively high and often excessive rate of water to effect desired operation.

The structure of the character referred to above provide for the flow of aerated water or for the flow of a mixture of soap and water only.

An object and feature of my invention is to provide a structure of the general character referred to which effectively shuts off the flow of soap when such is desired.

Another object of my invention is to provide an improved structure of the character referred to which is such that flows of clear unaerated water, aerated water, aerated soap and water or unaerated soap and water can be selectively dispensed.

It is an object and feature of my invention to provide a structure of the character referred to including a small, neat, compact manually engageable hand unit or wand defining an internal jet pump with a vacuum chamber, a water hose connected with the wand to deliver water to the pump, a discharge opening related to the pump and adapted to releasably connect with desired cleaning heads, a delivery port communicating with the vacuum chamber of the pump, a liquid soap supply remote from the wand, a soap supply tube extending from the soap supply to the wand and manually operable valve means in the wand related to the port and adapted to control the flow of air and/or soap through the port and into the pump.

It is a further object of my invention to provide a structure of the character referred to wherein the valve means includes a thumb or finger operated valve member accessible at the exterior of the wand.

Yet another object and feature is to provide a structure of the character referred to wherein the thumb operated valve member is provided with an air conducting passage that can be selectively closed and opened by engagement and disengagement of the operator's thumb or finger on and with said valve member.

Still another object and feature of my invention is to provide a structure of the character referred to wherein the thumb operated valve member carried and is provided with a ported valve plate adapted to be shifted relative to the valve member to open and close the air passage independently of the operator's finger when the valve member is shifted to and from predetermined positions relative to the inlet port in the wand.

It is an object and feature of my invention to provide a structure of the character referred to which is such that it can be made small and compact, a structure which lends itself to being established of molded plastics at low cost and a structure which is not subject to becoming fouled with soap and which is extremely easy to clean and service when and if circumstances require.

An important feature of the present invention is the provision of a structure of the character referred to wherein the mixing of soap and water is effected in the wand and wherein the supply of soap is effectively stopped when such flow is sought to be stopped.

The foregoing and other objects and features of the instant invention will become apparent and fully understood from the following detailed description of a typical preferred form and application of my invention throughout which description reference is made to the accompanying drawings, in which:

FIG. 1 is an isometric view of the invention showing it related to a typical bath tub and shower facility;

FIG. 2 is an enlarged detailed elevation view of part of the structure shown in FIG. 1;

FIG. 3 is an enlarged detailed sectional view taken as indicated by line 3-3 on FIG. 1;

FIGS. 4, 5 and 6 are sectional views of a portion of the structure illustrated in FIG. 3 and showing parts of the structure in different positions;

FIG. 7 is a sectional view taken as indicated by line 7-7 on FIG. 4;

FIG. 8 is a sectional view taken as indicated by line 8-8 on FIG. 4; and,

FIG. 9 is a sectional view taken as indicated by line 9-9 on FIG. 2.

The soap and water mixing and dispensing means provided by this invention and which is disclosed in the accompanying drawings can be related to and connected with any suitable supply of water and is particularly adapted for installation and use with typical bathing facilities including a bath tub B with an overhead shower water supply pipe P and manually operable water supply control valve and spigot means M, as illustrated in FIG. 1 of the drawings.
Since the environment in which my invention can be employed can vary widely and since the bathing facilities shown is only illustrative of one such environment well known to those familiar with the art to which this invention relates, I will not burden this disclosure with further detailed consideration of the particular facility shown in the drawing.

The mixing and dispensing means that I provide includes a small, neat, compact manually engageable unit U which can and will, in the following, be termed or referred to as an irrigating wand or unit.

The irrigating wand is an elongate unit having a rear inlet end 10, a front outlet end 11 and outside surfaces, which, if the unit is disposed horizontally and is rotated to that position shown in the drawings, can be defined as a top side or surface 12, a bottom surface 13 and side surfaces 14. The longitudinal extent of the unit U and the configuration and disposition of the several sides and/or surfaces 12, 13 and 14 can be varied as desired and as circumstances require and are preferably such that the unit can be easily, comfortably and conveniently engaged in one's hand for desired manipulation of the unit.

The unit is preferably established of molded plastic and is made up of three sections, there being a rear, primary body section 20, a central retainer section 21 and a front, head section 22.

The rear section 21 has a forwardly opening socket 23 with a cylindrical sidewall 24 and a forwardly disposed rounded bottom 25. The bottom 25 has a central forwardly projecting forwardly convergent and tapered nozzle 26 projecting freely into the socket. The forward end portion of the socket is internally threaded as at 27.

The section 21 has a substantially central, longitudinally extending water passage 28 concentric with and communicating with the nozzle 26 and extending rearwardly therefrom and into and through an externally threaded hose coupling connecting nipple 29 projecting rearwardly from the rear end 10 of the unit.

The rear section 20 of the unit U next includes an elongate, longitudinally extending, forwardly and upwardly opening ways 30 in its top side 12. The ways have a flat bottom 31, vertical sides 32, laterally inwardly opening longitudinal grooves 33 along its opposite sides at the junction of the bottom 31 and sides 32 and a forwardly disposed rear end 34. The front end of the ways is open.

The section 20 next includes a vertical delivery port 35 extending from the bottom 31 of the ways to the rear end of the socket 23 and at a point rearward of the forward discharge end of the nozzle 26.

Next, the section 20 includes an elongate longitudinally extending liquid or soap passage 36, above the water passage 28, the forward end of which communicates with a vertical soap port 37 entering the bottom 31 of the ways at a point spaced rearward of the delivery port 35 and extending rearwardly through the section and thence into and through a soap tube connecting nipple 38 projecting rearwardly from the rear end 11 of the unit.

The soap passage 36 is considerably smaller in diameter than the water passage 28.

The retainer section 21 is a simple flat apertured plate and is arranged adjacent the forward end of the section 20 with its aperture aligned with the socket 23 and having a portion which overlies the forward open end of the ways to define a front end 39 in the ways.

The front, head section 22 of the unit is an elongate part with a rear portion projecting through the aperture in the section 21 and threaded into the front end of the socket 23, a central, flange-like portion engaging the forward side of the section 21 to hold it in place and a front, forwardly projecting, externally threaded cleaning head engaging neck 40.

The section 22 has a central forwardly opening discharge opening 41 extending through the neck 40 and has a rearwardly opening, forwardly convergent, conical socket 42 communicating with the socket 28 and into which the forward end of the nozzle 23 freely projects.

The discharge opening 41 is concentric with, is spaced forward of and is slightly greater in diameter than the flow passage 28 in the section 21 and the nozzle 23.

The unit U is composed or made up of the sections 20, 21 and 22 disclose and described above for purposes of, ease of manufacture, assembly and service. In practice and for the purpose of further disclosure of this invention, sections 20, 21 and 22 will be considered as establishing a single, integral unit.

The unit U next includes valve means V which means includes a valve member 50. The member 50 is an elongate bar-like part with top and bottom surfaces 51 and 52, front and rear ends 53 and 54, sides surface 55 and laterally outwardly projecting, longitudinally retaining flanges 56 at its opposite side. The member is less in longitudinal extent than the longitudinal extent of the ways and is slidably engaged in said ways with its bottom surface in forming sealing engagement with the bottom 31 of the ways, its flanges engaged in the groove 33 of the ways and with its sides in opposing, sliding engagement with the sidewalls of the ways.

The member is engageable in the ways from the forward end thereof when the section 21 is moved from engagement over the front end of said ways.

The valve member 50 is provided with an elongate downwardly opening flow channel 60 in its bottom surface which channel is greater in longitudinal extent than the distance between the ports 35 and 37 in the section 20 and which enter the bottom of the ways.

The valve member is shiftable longitudinally in the ways 30 from a first, forward, closed position where the flow channel 60 communicates with the port 35 only as shown in FIG. 3, rearward to a second position where the channel communicates with port 35 only as shown in FIG. 4, rearward to a third position where the channel 60 bridges and communicates with both ports 35 and 37, as shown in FIG. 5 and finally, to a fourth and rear position where the channel 60 communicates with both of said ports and as shown in FIG. 6.

The valve member 50 next includes a vertical air passage 61 entering its top and communicating with the channel 60. The passage 61 preferably enters the bottom or lowermost, central portion of an upwardly disposed concave thumb or finger recess 62 provided in the top surface 51 of the member 50.

The valve means V next and further includes a secondary valve means Y in the form of a slide valve carried by the valve member 50 and adapted to close the port 61 when the valve member is in its first, forward position and when it is in its fourth, rear position.

The means Y includes an elongate valve plate 65 with a vertical air port 66 therein. The plate is greater in longitudinal extent than the member 50 and is slidably engaged in a longitudinal opening 67 in the member 50 which opens at the front and rear ends of said member and intersects the passage 61.

The plate 65 normally projects forwardly and rearwardly from the front and rear ends of the member 50 a limited distance and its port 66 is normally in register with the passage 61 as shown in FIGS. 4 and 5 of the drawings.

The plate 65 is normally yieldedly held in the above noted normal position by suitable spring means S, which means, in the case illustrated, includes a vertical spring stop on the plate, projecting into the central portion of an elongate, longitudinally extending cavity in the member 50 and a pair of balanced compression springs at the opposite sides of the stop and extending between the stop and the ends of the cavity.

When the valve member 50 is in its second position, as shown in FIG. 4, the front end of that member is spaced from the forward end 39 of the ways and the forward end of the plate, which is in its normal position, engages the end 39 of the ways. When the member 50 is moved forward to its first and forward position, where its front end stops against the end 39 of the ways, the plate 65 is urged rearwardly in the member 50 and the passage 61 is closed, as shown in FIG. 5.

When the member 50 is in its third position, as shown in FIG. 5, the plate is in its normal position, the rear end of the
member 50 is spaced from the rear end 34 of the ways and the rear end of the plate engages said rear end of the ways. When the member 50 is moved rearward to its fourth or rear position, where its near end stops against the rear end 34 of the ways, the plate 65 is urged forwardly in the member 50 and the passage 61 is closed, as shown in FIG. 6 of the drawings.

The construction is further provided with indexing means I to signal and to yieldingly retain the valve member 50 when it is moved from one position to another. The indexing means I that I have elected to illustrate includes a spring-loaded ball 70 carried by the member 50, at the bottom side or surface thereof and a plurality of longitudinally spaced detents 71 in the bottom 31 of the ways. There is a detent 71 into which the spring-loaded ball 70 moves and seats when the member 50 is moved to each of the four noted positions and as clearly illustrated in FIGS. 3 through 6 of the drawings.

It is to be noted and understood that the spring means S and the indexing means I that I have illustrated can be varied widely in form and arrangement without departing from or effecting the spirit of this invention.

The neck 40 of the unit 7 may be screw connected with any suitable cleaning head, such as a spray head H, as illustrated in FIGS. 1 and 3 of the drawings.

The nipple 29 is connected with a hose coupling part 75 at the outlet end of an elongate flexible water hose W which extends from a suitable water supply.

In the case illustrated, the water supply is the shower water pipe P spaced above the tub T. The hose W is connected with the pipe P by means of a male-female nipple 76 engaged on the pipe P and with which a coupling 77 on the inlet end of the hose is engaged.

Such a supply of water is only illustrative and typical of one form of water supply and hookup that can be employed in the normal use of my invention.

The nipple 38 is connected with the discharge or outlet end of an elongate, small diameter, flexible fluid or liquid soap conducting tube L. The outlet end of the tube L is shown slidably and frictionally engaged on and about the nipple 38.

The other or inlet end of the tube L, remote from the unit U is connected with a liquid soap supply means J, which supply means is shown as including a simple plastic jar or vessel 80 with a screw-on cap or closure 81 in which a supply of liquid soap is deposited. The cap 81 has an opening 82 through which the inlet end of the tube L extends to depend into the jar and to terminate adjacent the bottom thereof.

The cap is further provided with a suitable vent opening 83.

In the case illustrated, the cap is provided with a ball-like hanger 64 which is engaged with a hook 65 on the nipple 76, as clearly illustrated in the drawings.

In practice, the means J can vary widely in form without departing from the spirit of my invention; for example the soap could be in a collapsible plastic bag having a loop or grommet at its upper end to facilitate hanging the bag and the tube L could be suitably connected with an outlet at or in the lower or bottom end of the bag.

In practice, it is desirable that the hose W and tube L be secured or otherwise related with each other so as to establish a single elongate flexible unit or assembly and to avoid the presence of a pair of separate flexible members which might become tangled and cause a nuisance or inconvenience.

In the prior art, special hoses with a pair of flow passages have been employed in structures and apparatus of the character here concerned with. Such hoses are costly and require the use of special and costly hardware to effect their being connected with their related parts and means.

In the present invention, I provide a novel tube L having an elongate hose-engaging clip 90 along its major, central, longitudinal extent, to engage the hose W and to maintain the hose and tube in adjacent parallel relationship.

The tube L is an extruded plastic member originally established with a large diameter tube portion, slightly less in inside diametric extent than the outside diametric extent of the hose W, (which hose is a simple, standard and inexpensive hose) and a small diameter portion formed integrally and extending parallel with the large diameter portion and which establishes the tube L per se.

The end portions of the large diameter portion of the extruded member are cut away and/or stripped from the small diameter portion and the remaining large diameter portion is split, longitudinally, adjacent the small diameter portion, as at 91 and so that the large diameter portion establishes the flexible clip 90 which can be flexed open to receive and which will thereafter close above and yieldingly embrace the hose W, to maintain the hose and tube assembled, as clearly illustrated in FIGS. 1, 2 and 9 of the drawings.

The tube L is subjected to little fluid pressure and is such that the member employed to establish the tube L and its clip 90 can be thin, light, extremely flexible and inexpensive.

In operation when the unit U is connected with a flowing supply of water and a supply of soap, as illustrated in the drawings, and the valve means V and V' are in their first or forward positions, as shown in FIG. 3 of the drawings, the port 37 and passage 61 are closed and only water is conducted through and from the unit U.

When the valve means is shifted rearwardly to its second position, as shown in FIG. 4, the port 37 is still closed and the passage 61 is open, with the result that air is free to flow therethrough, into the channel 60, and thence through the port 35 and into the vacuum chamber in the unit U defined by the sockets 33 and 42.

The jet of water issuing from the nozzle 26, through the vacuum chamber and thence out through the opening 41 establishes a minus pressure in the chamber. This minus pressure draws the air into the chamber, to mix with the water and so that the water issuing from the unit, when in the noted second position, is aerated.

When the valve means V and V' are in the noted second position, the flow of air into the unit can be selectively shut off by the operator of the unit by placing his thumb or the member 50 over the upper open end of the passage 61 and thereby selectively change the discharge from the unit to and from, clear and aerated water.

When the valve means is shifted from its second position to its third position, as shown in FIG. 5 of the drawings, the ports 35, 37 and passage 61 are all open and the minus pressure in the chamber of the unit draws liquid soap and air into the vacuum chamber to mix with the water and so that the discharge from the unit U is aerated and mixed soap and water. This discharge is primarily a discharge of soap and water.

When the structure is in the above noted third position, the operator can place his thumb over the passage 61 to shut off the supply of air and thereby change the discharge from soap and water to a straight mixture of soap and water.

Finally, when the valve means are shifted to their forward and rearmost position, as shown in FIG. 6 of the drawings, the ports 35 and 37 are open and in communication and the passage 61 is closed and a constant and steady discharge of soap and water is obtained.

It is to be noted that while the valve means are shiftable to four distinct positions to effect four distinct forms or kinds of discharge, the noted placement of one's finger over the passage 61 when the structure is in its second and third positions provides what is in fact two additional or intermediate positions or operating conditions, with the result that the structure provides six (6) different and distinct operating conditions and/or positions, to provide four distinct forms of discharge, all at the fingertips control of the operator.

Having described only a typical preferred form and application of my invention, I do not wish to be limited to the specific details herein set forth, but wish to reserve to myself any modifications and/or variations that may appear to those who are skilled in the art to which this invention relates and which fall within the scope of the following claims.

Having described my invention, I claim:

1. An irrigating apparatus for barbers including a water supply, a liquid soap supply, a manually engageable unit, an
elate flexible water hose between and communicating with the water supply and unit, an elongate liquid soap conducting tube between and communicating with the liquid soap supply and the unit, said unit including a water inlet passage communicating with the hose, a vacuum chamber, a nozzle projecting into the chamber, and communicating with the inlet passage, an outlet passage in axial alignment with said nozzle and communicating with the chamber, a delivery port communicating with the chamber remote from said nozzle and delivery passage and opening outwardly, a soap port communicating with the tube, opening outwardly and spaced from the delivery port, a manually engageable shiftable valve member carried by the unit to overly the delivery and soap ports and having a flow channel which is moved into and out of bridging communicating engagement with the soap and delivery ports and an air passage in the valve member communicating with the channel and having an open outer end adapted to be selectively opened and closed by the thumb of an operator.

2. A structure as set forth in claim 1 which further includes a valve plate shiftable carried by the valve member to intersect the air passage and having an air port normally in register with the air passage means to selectively shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is out of bridging communication with the delivery and soap ports and to shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is in bridging communication with the delivery and soap ports.

3. A structure as set forth in claim 1 which further includes a valve plate shiftable carried by the valve member to intersect the air passage and having an air port normally in register with the air passage means to selectively shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is out of bridging communication with the delivery and soap ports, said means to selectively shift the plate including opposite end portions on the plate projecting from the opposite ends of the valve member in line with the direction of travel of said member and stop means on said unit to engage and stop the plate upon predetermined movement of the member and to effect relative shifting of the member and plate.

4. A structure as set forth in claim 1 which further includes a valve plate shiftable carried by the valve member to intersect the air passage and having an air port normally in register with the air passage means to selectively shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is out of bridging communication with the delivery and soap ports and to shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is in bridging communication with the delivery and soap ports.

5. A structure as set forth in claim 1 which further includes a valve plate shiftable carried by the valve member to intersect the air passage and having an air port normally in register with the air passage means to selectively shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is out of bridging communication with the delivery and soap ports and to shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is in bridging communication with the delivery and soap ports, said means to selectively shift the plate including opposite end portions on the plate projecting from the opposite ends of the valve member in line with the direction of travel of said member and stop means on said unit to engage and stop the plate upon predetermined movement of the member and to effect relative shifting of the member and plate, and spring means between the member and the plate to normally yieldingly hold the plate in a position where the air port therein is in register with the air passage.

6. A structure as set forth in claim 1 which further includes a valve plate shiftable carried by the valve member to intersect the air passage and having an air port normally in register with the air passage means to selectively shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is out of bridging communication with the delivery and soap ports.

7. A structure as set forth in claim 1 which further includes a valve plate shiftable carried by the valve member to intersect the air passage and having an air port normally in register with the air passage means to selectively shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is out of bridging communication with the delivery and soap ports, said means to selectively shift the plate including opposite end portions on the plate projecting from the opposite ends of the valve member in line with the direction of travel of said member and stop means on said unit to engage and stop the plate upon predetermined movement of the member and to effect relative shifting of the member and plate, and spring means between the member and the plate to normally yieldingly hold the plate in a position where the air port therein is in register with the air passage.
munication with the delivery and air ports and the air port is out of register with the air passage, and index means between the unit and the member to selectively and yieldingly stop and hold the member in each of said first, second, third and fourth positions, said indexing means including a spring-loaded ball carried by the member and four spaced detents in the unit to cooperatively receive said ball.

8. A structure as set forth in claim 1 wherein said tube being smaller in diameter than the hose and having a longitudinally split tubular section along a portion of its longitudinal extent yieldingly engaged about and embracing an adjacent portion of the hose whereby the tube and hose are releasably retained in adjacent parallel relationship with each other throughout said portion of said tube.

9. A structure as set forth in claim 1 which further includes a valve plate shiftably carried by the valve member to intersect the air passage and having an air port normally in register with the air passage means to selectively shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is out of bridging communication with the delivery and soap ports and to shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is in bridging communication with the delivery and soap ports, said means to selectively shift the plate including opposite end portions on the plate projecting from the opposite ends of the valve member in line with the direction of travel of said member and stop means on said unit to engage and stop the plate upon predetermined movement of the member and to effect relative shifting of the member and plate, and spring means between the member and the plate to normally yieldingly hold the plate in a position where the air port therein is in register with the air passage, said tube being smaller in diameter than the hose and having a longitudinally split tubular section along a portion of its longitudinal extent yieldingly engaged about and embracing an adjacent portion of the hose whereby the tube and hose are releasably retained in adjacent parallel relationship with each other throughout said portion of said tube.

10. A structure as set forth in claim 1 which further includes a valve plate shiftably carried by the valve member to intersect the air passage and having an air port normally in register with the air passage means to selectively shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is out of bridging communication with the delivery and soap ports and to shift the plate to move the air port therein out of register with the air passage when the member is in a position where the channel is in bridging communication with the delivery and soap ports, said means to selectively shift the plate including opposite end portions on the plate projecting from the opposite ends of the valve member in line with the direction of travel of said member and stop means on said unit to engage and stop the plate upon predetermined movement of the member and to effect relative shifting of the member and plate, said valve member shiftable from a first position where the channel is out of bridging communication with the delivery and soap ports and the air port is out of register with the air passage to a second position where the channel is out of bridging communication with the delivery and soap ports and the air port is in register with the air passage, to a third position where the channel is in bridging communication with the delivery and soap ports and the air port is in register with the air passage, to a fourth position where the channel is in bridging communication with the delivery and air ports and the air port is out of register with the air passage, and index means between the unit and the member to selectively and yieldingly stop and hold the member in each of said first, second, third and fourth positions, said indexing means including a spring-loaded ball carried by the member and four spaced detents in the unit to cooperatively receive said ball, said tube being smaller in diameter than the hose and having a longitudinally split tubular section along a portion of its longitudinal extent yieldingly engaged about and embracing an adjacent portion of the hose whereby the tube and hose are releasably retained in adjacent parallel relationship with each other throughout said portion of said tube.