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DOUCHE ATTACHMENT FOR CONNECTION WITH A SHOWER HAVING ANTISIPHON AND PRESSURE CONTROL MEANS

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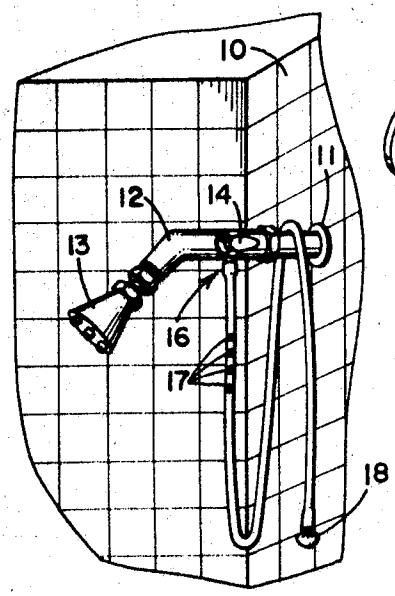


FIG. 1

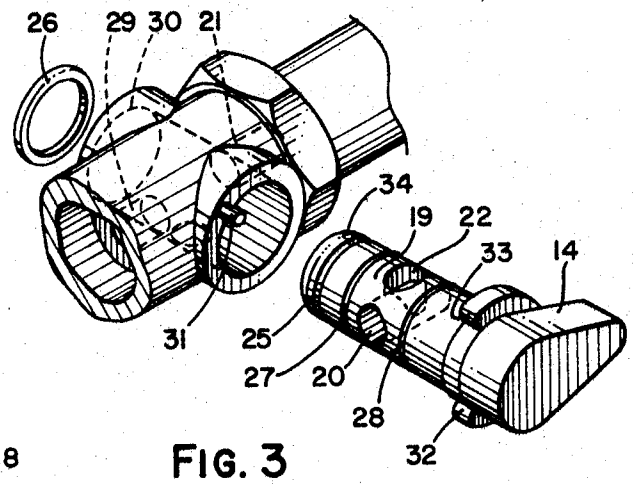


FIG. 3

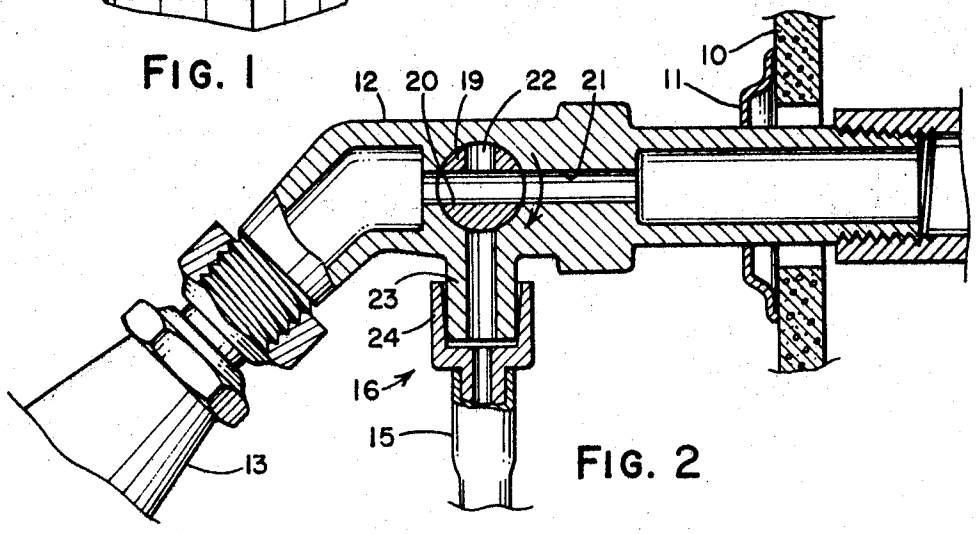


FIG. 2

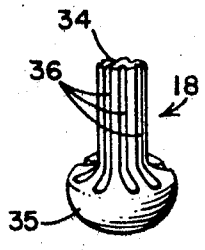


FIG. 4

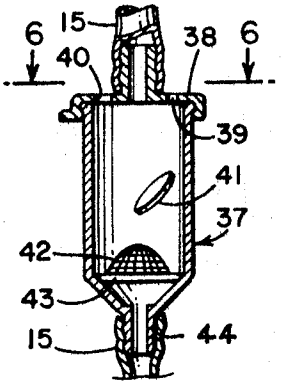


FIG. 5

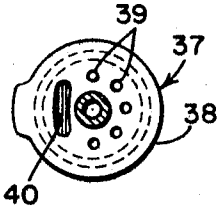


FIG. 6

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DOUCHE ATTACHMENT FOR CONNECTION WITH A SHOWER HAVING ANTISIPHON AND PRESSURE CONTROL MEANS

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Continuation-in-part of application Ser. No. 448,360, Apr. 15, 1965, which is a continuation-in-part of application Ser. No. 430,101, Feb. 3, 1965. This application Mar. 6, 1967, Ser. No. 620,933

Int. Cl. A61m 7/02

U.S. Cl. 128—229

11 Claims

ABSTRACT OF THE DISCLOSURE

A tube with a douching instrument or nozzle and associated branch valve for connection to a shower head outlet to enable douching operations to be carried out in the shower. The tube itself includes side openings to provide an antisiphon, reduce pressure at the nozzle, and enable monitoring of water temperature by testing water passing from the openings. The branch valve is insertable between the shower head outlet and shower head itself so that it can be removed if desired without requiring pipe modifications.

This application is a continuation-in-part of my co-pending application Ser. No. 448,360, filed Apr. 15, 1965 and entitled Douche Attachment, now abandoned, which application in turn is a continuation-in-part of my co-pending application Ser. No. 430,101, filed Feb. 3, 1965 and also entitled Douche Attachment, now abandoned.

This invention relates generally to douching apparatus and more particularly to a novel douche attachment for connection between a shower head water outlet supply and the shower head itself so that douching may be carried out in a shower enclosure without the necessity of using a douche bag.

Conventional douching requires that a woman fill a a douche bag with water at a comfortable temperature and suspend it at a given level above the end of the douching instrument. There are thus required hooks or other means for supporting the bag in an elevated position. Further, such suspending of the bag cannot always be carried out without spilling. In addition, there is usually no convenient place to store the douch bag and yet permit it to dry up after use. As a consequence, the bag is usually left hanging on the bathroom door hook or other location in the bathroom to the annoyance of other persons who may enter the bathroom.

Furthermore, with conventional douch bags, a woman will generally employ the douching instrument until all of the water has left the bag. As a consequence, the douching instrument itself may become clogged or contaminated unless additional douching water is passed through the instrument after it has been removed. A similar situation obtains with respect to the douche bag which still retains moisture on its inner surfaces and may provide an environment for bacterial growth and the like.

With the foregoing in mind, it is a primary object of this invention to provide a douche attachment which does away with any necessity for a douche bag itself, all to the and that the above problems are readily overcome.

More paticularly, it is an object to provide a douche attachment which may be readily secured between a standard water outlet in a shower and the shower head as a substitute for the conventional short length of pipe connecting the shower head to the outlet so that use may be made of water from the water outlet for the douching operation thereby avoiding the problem of filling and suspending a bag.

Another object is to provide a douch attachment readily adaptable for use with conventional douching hoses and instruments.

Another important object is to provide a combination douch attachment and douching hose incorporating means for readily introducing an additive to the douching water, such as a medicant solution or other chemical.

Still another important object is to provide a douche attachment in which the water temperature may be very easily adjusted prior to an actual douching operation.

Another very important object of this invention is to provide a douche attachment which, while having its water supply from a shower head water outlet, nevertheless insures unique control of the rate of flow of water so that any accidental increases in pressure or the like will not appreciably affect the rate of flow of water to the douching instrument or nozzle.

Still another object is to provide a douche attachment which is extremely simple and rugged in design, satisfies the plumbing cole with respect to antisiphon provisions, and incorporates only a single valve operating mechanism so designed as to enable diverting of the water from the shower head to the douche apparatus with only a single manual movement.

Briefly, these and many other objects and advantages of this invention are attained by providing a douche attachment in the form of a pipe fixture having opposite threaded ends for easy insertion between a water outlet for a shower head and the shower head itself. This pipe fixture includes an angulated end portion for connection to the shower head so that the shower head is disposed at a downward angle. This feature in conjunction with the conventional ball-type swivel enables the shower head to be more easily directed towards the wall of the shower itself. The pipe fixture also includes a transverse opening intersecting the internal passage therethrough adapted to receive a valve body. This valve body functions as a diverting valve for diverting water from the water outlet normally passing to the shower head to a laterally extending nipple from the pipe fixture.

The nipple, in turn, is adapted to be connected in a preferred embodiment of the invention to the upper end of a hose by means of a tapered connector received over the nipple. This hose includes a plurality of lateral or side openings providing an antisiphon and pressure control. The lower end of the hose receives a novel douching instrument or nozzle designed to eject water over 360°.

In a modified embodiment, the hose includes an applicator chamber in series such that the chamber is disposed in a vertical position. Rather than lateral or side openings in the hose, the chamber includes upper openings such that water passing through the chamber is regulated in flow rate in that the upper openings serve as an exit means for the water should the flow rate exceed a predetermined value. The water actually flowing through the remaining portion of the douche hose to the douching instrument or nozzle is at a rate thus corresponding to that which would be provided by a conventional douche bag.

The upper openings in the applicator chamber also serve to provide an antisiphon feature for the attachment in order to meet conventional plumbing codes. The chamber itself is arranged to receive a dissolvable additive so that the douching water may be treated with an additive if desired.

With the foregoing arrangement, the douche attachment and douche hose together with the douching instrument or nozzle may be left permanently connected to the pipe fixture between the water outlet and shower head fixture in an out-of-the-way place. There is no douche bag involved so that drying problems and the like are completely avoided. Further, the douching operation may be carried out in the shower and it is an easy matter for the user to adjust the proper water temperature by feeling the water passing through the openings in the hose. In addition, after the douching operation is complete, the user may permit the water to continue to run through the douching instrument and thereby cleanse the same.

A better understanding of the invention will be had by now referring to preferred embodiments thereof as illustrated in the accompanying drawings, in which:

FIGURE 1 is a fragmentary perspective view of a shower incorporating the douche attachment of this invention;

FIGURE 2 is a greatly enlarged cross section of the douche attachment illustrated in FIGURE 1;

FIGURE 3 is a fragmentary perspective view partly exploded useful in describing the valve assembly in the douche attachment;

FIGURE 4 is a perspective view of the douching instrument or nozzle utilized in the apparatus of FIGURE 1;

FIGURE 5 illustrates an applicator chamber which may be incorporated in the douche hose in accord with a modification of the apparatus; and,

FIGURE 6 is a cross section taken in the direction of the arrows **6—6** of FIGURE 5.

Referring first to FIGURE 1, there is shown a portion of a shower wall **10** including an annular chrome flange **11** surrounding the conventional water outlet to which a short length of pipe and a conventional shower head is affixed. In accordance with the present invention, the short length of pipe normally connected to the water outlet is removed and the douche attachment of this invention is substituted. This douche attachment takes the form of a pipe fixture **12** having an outer end portion for reception of the conventional shower head **13**.

At an intermediate point in the pipe fixture **12** there is provided a three-way valve body having a handle portion **14** and arranged to divert water from the water outlet normally passing to the shower head **13** through a lateral outlet connected to a douche tubing or hose **15** by a connector **16**. The hose **15** includes lateral or side wall openings **17** and terminates at its lower end in a douching instrument or nozzle **18**.

Referring now to the enlarged cross section of FIGURE 2, details of the valve body portion connected to the handle **14** of FIGURE 1 are illustrated. The valve body is indicated at **19** and includes a transverse cylindrical bore **20** arranged to be aligned with the internal passage **21** of the pipe fixture **12** when in a first position. A lateral bore **22** communicates with the transverse bore **20** and it will be evident that if the valve body **19** is rotated in a clockwise direction as viewed in FIGURE 2 a quarter turn to a second position, the lateral bore **22** will receive water from the internal passage **21** from the water outlet and divert the same through a lateral nipple **23** connecting to the hose **15** by means of the connector **16**. The connector **16** is internally tapered as at **24** to provide a friction fit over the nipple **23**. It will be also be evident that when the valve body **19** is rotated to this second position, water passing through the internal passage **21** is blocked from passing out the shower head **13**.

Referring now to the perspective exploded view of FIGURE 3, the details of the valve structure will become clear. As shown, the valve body **19** is preferably cylindrically shaped and terminates at its far end opposite the operating handle **14** in an annular groove **25** for receiving an O-ring **26**. Further O-rings **27** and **28** are provided intermediate the ends of the body **19** on either side of the passages **20** and **22**.

The internal passage **21** indicated by dotted lines in FIGURE 3 is intersected by a transverse opening **29** which is provided with a matching cylindrical interior to that of the valve body **19**. The arrangement is such that the valve body **19** with its transverse and lateral bores **20** and **22** may be received within the transverse opening **29** in such a manner that the end O-ring groove **25** will extend beyond the peripheral end **30** of the transverse opening in a position to receive the O-ring **26** and thereby lock the valve body **19** in the transverse opening. The arrangement is extremely simple and by constructing the valve body of suitable plastic material, an excellent bearing will be provided for rotative movement of the valve body without risk of the valve body itself moving longitudinally out of the transverse opening **29**. The valve structure is thus designed for easy cleaning and inexpensive manufacture.

Preferably, the valve body is limited to a quarter turn between its first and second positions by means of a lug **31** at the entrance portion of the transverse opening **29** in the pipe fixture. This lug engages stops **32** and **33** in a flange adjacent to the handle **14** of the valve body **19** to thus limit rotative movement of the body.

Referring now to FIGURE 4, there is shown the douching instrument or nozzle **18**. This member includes a solid cylindrical body portion **34** terminating in an enlarged diameter smoothly rounded head **35**. The peripheral surface of the portion **34** includes a plurality of longitudinally extending grooves **36** terminating in the initial portion of the enlarged head **35**. The dimensioning of the body **34** is such as to be received in the end of the hose **15** in a friction fit such that the grooves define with the interior wall of the hose narrow channels through which water passes.

The channels are of a size to filter out any large particles that may be in the water. Further, the grooves by extending into the initial portion of the head beyond the end of the tube define at these ends outlets for the water, the water being deflected by the enlarged head to squirt out laterally over 360°. It will be evident that a portion of the tube constitutes part of the douching instrument and in view of its flexibility it can easily follow the contours of the vaginal passage during the douching operation.

Referring now to FIGURE 5, there is shown an applicator chamber **37** which may be incorporated in the hose **15** in place of the section of tubing in FIGURE 1 having the openings **17**. As shown, the upper end of the chamber includes a cover **38** having a connection to the tube **15** leading to the valve body. The cover is provided with a plurality of openings **39**. One of these openings is in the form of an elongated slot **40**, as best shown in FIGURE 6, of sufficient size to receive a pill **41**. The pill or dissolvable additive **41** is retained in the chamber by a mesh screen **42** seated on a washer **43**. The lower end of the applicator chamber terminates in a nipple **44** for connection to the remaining portion of the douche hose **15**.

The provision of the applicator chamber openings **39** and the elongated slot **40** as described constitute an important feature in this embodiment of the invention. This chamber with its openings serves three functions: first, it functions to enable a dissolvable additive to be received and held in the water flow so that a desired chemical may be dissolved in the water; second, it serves as a rate of flow control device in that should a sudden increase in pressure result in an increase in the rate of flow of water through the applicator and douche tube, the openings in the cover will function as exit openings for the water, the water simply spouting out the openings and overflowing. In this connection, the total area of the openings is considerably greater than the hose passage

so that water will overflow from the chamber **37** before there is any appreciable increase in pressure in the water flowing out the lower end of the chamber to the douche hose. It will be evident, accordingly, that the pressure of the water in the douche hose will correspond to that provided by a douche bag at approximately the same level as the chamber; third, the openings **39** and **40** function as an antisiphon for the plumbing system in which the douche attachment is employed so as to meet the plumbing code requirements.

If the provision of a medicant or dissolvable pill is not necessary, the embodiment of FIGURE 1 would be used wherein no chamber is necessary, the side openings **17** in the hose providing the desired pressure or flow control and antisiphon feature.

The operation of the entire douche attachment will now be described. As set forth heretofore, the douche attachment pipe fixture **12** is very easily substituted for the conventional straight short water pipe normally supporting the shower head **13** in the shower stall. This substitution may be very easily carried out without need of the services of a plumber since standard threads are employed on the pipe fixture **12**.

After the pipe fixture **12** has been installed, the connector **16** for the hose **15** is urged over the nipple **23**. The nozzle **18**, if not already in place, may be urged into the lower end of the hose **15** and the entire structure stored in the shower stall as illustrated in FIGURE 1.

When in the stored position illustrated in FIGURE 1, the valve handle **14** is oriented with its elongated axis in a horizontal direction which will indicate to the user that normal shower head operation will take place. In other words, in this first position of the valve handle, the transverse bore **20** of the valve body as illustrated in FIGURE 2 is in alignment with the internal passage **21** in the pipe fixture **12** so that water will pass from the water outlet to the shower head **13** in a conventional manner.

When it is desired to carry out a douching operation, a woman may first divert the shower head **13** towards a wall and turn on the shower with the usual shower valves. The temperature of the water from the shower head **13** may be easily adjusted by testing the same with her hands without wetting her entire body. When the temperature of the water is proper, the woman will then rotate the valve handle **14** in a clockwise direction as viewed in FIGURES 2 and 3 a quarter turn to its second position.

With the valve turned so that the longitudinal axis of the handle **14** points downwardly, water will be blocked from passing out the shower **13** and will be diverted through the valve body and through the nipple **23** as described in conjunction with FIGURE 2. The water will then pass through the hose **15** to the instrument or nozzle **18**. If a dissolvable additive is employed, a hose incorporating the applicator chamber **37** is used and the additive simply inserted through the elongated slot **40**. The woman may pinch off the lower end of the hose **15** below the applicator chamber **37** to permit the applicator chamber to fill with water at least one-half to three-quarters full so that the additive **41** will be covered with water. If the chamber is not used, pinching of the hose **15** will force water out of the openings **17** in the hose and the user can test this water with her hands to make sure the temperature is correct. Further, when not using the applicator chamber, the flow of water may be adjusted by the valves for the shower water to a flow rate at which water trickles out of the lowermost of the holes **17** only. The pressure will then correspond to that of a douche bag at the level of the holes.

The woman may then employ the douching instrument **18** of FIGURE 1 in the conventional manner and carry out the douching operation.

After the douching operation has been completed, the woman will permit water to still run from the end of the douching instrument **18** to cleanse the same. She may then rotate the handle **14** in a counterclockwise direction to its original horizontal position so that water will then flow out of the shower. She may then take a conventional shower if she desires.

It is to be noted that water will either issue from the shower head **13** or from the douching instrument **18** depending upon whether the valve **14** is in its first or second position. Therefore, the woman will always be advised that the conventional shower control valves are on and there will be no possibility of her inadvertently forgetting to shut off the shower control valves so that water will not remain running through the douching instrument.

After the douching operation and shower are complete, the woman may simply suspend the instrument as illustrated in FIGURE 1 and shut off the shower with the conventional valves. Alternatively, it is very simple for the woman to simply pull the connector **16** from the nipple **23** as shown in FIGURE 2 and store the douching apparatus portion comprising the applicator chamber, if used, hose, and douching nozzle **18**.

From the foregoing description, it will thus be evident that the present invention has provided a greatly improved douching apparatus which meets all of the various objects set forth heretofore. Thus, not only is the use of the conventional douche bag wholly avoided with the avoidance of the attendant disadvantages thereof, but in addition, a continuous supply of douching water is insured and its flow rate is such as to correspond to that provided by a conventional douche bag.

While only one particular embodiment of the invention has been set forth and described, it will be understood that various changes may be made that fall clearly within the scope and spirit of this invention by those skilled in the art. The douching apparatus is therefore not to be thought of as limited to the one embodiment set forth merely for illustrative purposes.

What is claimed is:

1. A douche attachment for connection between a water outlet and a shower head, including, in combination: a pipe fixture having an internal passage for passing water from said water outlet to said shower head; nipple means defining a lateral passage extending from a side of said pipe fixture and intersecting said internal passage at a given point; a diverting valve body disposed at said point in said internal passage for passing water to said shower head when in a first position and diverting water to said nipple means for douching purposes when moved to a second position; and a douche hose connected to said nipple means at one end and terminating in a douching nozzle at its other end, said hose including antisiphon and pressure control means intermediate its ends through which water in said hose can flow to the atmosphere when the rate of flow exceeds a given rate of flow.

2. A douche attachment according to claim **1**, in which said antisiphon and pressure control means comprises a plurality of holes in vertical portion of said hose extending one above the other along said portion.

3. A douche attachment according to claim **1**, in which said antisiphon and pressure control means comprises an applicator chamber connected in series in said hose with its upper end in an upright position, said chamber having upper openings to the atmosphere to function as an exit means for water passing through said chamber should the rate of flow of water therethrough exceed a predetermined value.

4. A douche attachment for connection between a water outlet and shower head, comprising, in combination: a pipe fixture having an internal passage and threads at each end for threaded connection between said water outlet and shower head, said pipe having an intermediate transverse opening intersecting said internal passage; a lateral outlet nipple communicating with said transverse opening; a valve body receivable in said transverse opening and including a first bore adapted to be aligned with

said internal passage when said valve body is in a first position to pass water to said shower head, said valve body having a lateral bore intersecting said first bore, said lateral bore being adapted to receive water from said water outlet and divert the water through said lateral outlet nipple when said valve body is rotated a quarter turn in said transverse opening to a second position, water being blocked from passing to said shower head when said valve body is in said second position; and a douche hose detachably connected at one end to said nipple and terminating at its other end in a douching instrument, said hose including an antisiphon and pressure control means providing communication to the atmosphere for water flowing through said hose.

5. An attachment according to claim 4, in which said antisiphon and pressure control means comprises a plurality of holes in a vertical portion of said hose extending one above the other along said portion.

6. An attachment according to claim 4, in which said antisiphon and pressure control means comprises an applicator chamber interposd in said douche hose in a vertical position, said chamber including upper openings to the atmosphere to provide an antisiphon for said water outlet and function as an exit means for water passing through said hose and chamber should the rate of flow of said water exceed a predetermined value, said chamber also including a filtering screen for supporting a dissolvable additive for water flowing through said douche hose.

7. An attachment according to claim 6, in which one of said upper openings in said chamber is sufficiently large to receive said dissolvable additive.

8. An attachment according to claim 4, in which said lateral outlet nipple has a cylindrical exterior surface and said hose includes a connector having an interior tapered surface to frictionally engage over said nipple.

9. An attachment according to claim 4, in which said transverse opening is cylindrical, said valve body having

a matching cylindrical exterior and terminating in an external annular groove adapted to receive an O-ring to engage the periphery of said transverse opening when said valve body is inserted therein to hold said valve body in position, said valve body including additional O-rings on either side of its lateral bore.

10. An attachment according to claim 4, including cooperating stop means on said valve body and pipe fixture for limiting rotative movement of said valve body between said first and second positions.

11. An attachment according to claim 4, in which said douching instrument comprises a cylindrical body terminating in an enlarged head, said body having longitudinal grooves extending into the initial portion of said head, said body being receivable in the end of said hose to define with said grooves restricted passages for water flow, said flow passing from the ends of said grooves at said head over 360°.

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