MEANS FOR HEATING SHAVING LATHER

This disclosure relates to the heating of shaving lather from an aerosol type container by direct contact of the lather with hot water. The cover cap for the container is provided with an inlet valve assembly on its bottom such that the cover or cup may be removed and inverted and filled with hot water. The valve assembly is then positioned over the conventional push stem valve of the aerosol type container and urging downwardly of the cup causes the latter to enter the cup and intermix with the hot water. The lather may be entrained or entrapped in the water by an applicator member receivable in the cup to hold the lather immersed in the water.

This invention relates generally to a simplified means for heating and moistening lather from a conventional aerosol-type container.

A primary problem relating to conventional types of shaving lather heaters is the difficulty in maintaining the lather in contact with the heat source for a sufficient time to enable the temperature of the lather to be raised to or near the temperature of the heat source.

In attempting to accomplish this result, the aerosol-type containers have been provided with attached heating devices which are often relatively complex and expensive. Moreover, the attachment of the heating device to the container has often necessitated considerable modification of the container with the result of increasing the costs of manufacture and assembly.

Another practical problem relating to conventional container and heater combinations is that the overall height and size of the container and heater may be significantly increased, thus presenting difficulties in packaging, storage, and handling.

With the foregoing in mind, it is accordingly a primary object of this invention to provide an improved and simplified means for providing shaving lather in heated and moistened condition.

More particularly, it is an object to provide a means for maintaining shaving lather in direct contact with a source of heat for a sufficient period of time to enable the lather to be available for use at a temperature substantially the same as that of the heat source.

Another object is to provide a novel means for providing a heated and moistened lather from an aerosol-type container without requiring substantial modifications of the container itself, with the result that the invention may be manufactured at costs substantially below those required for prior art devices.

Briefly, these and many other objects and advantages of this invention are attained by providing cup means for receiving shaving lather from an aerosol-type container, and for holding the lather in hot water which may be introduced into the cup means either before or after the lather is received in the cup means. The direct contact of lather and hot water results in direct heating and moisturizing of the lather. The lather may then be scooped from the cup means and applied to the face of the user.

In a second embodiment of the invention, an applicator member is provided into which the lather is injected from the aerosol container. The applicator member and lather may then be inserted within the cup means to maintain the lather submerged in hot water introduced into the cup means. By this arrangement, the lather is retained or entrapped within the applicator member to thus maintain the lather completely within the hot water for more efficient heat transfer. Upon sufficient heating, the applicator and lather may be removed from the cup means, whereupon the user simply scoops the lather from the applicator.

In a third related embodiment, the cup means is provided with an inlet valve assembly for admitting lather from an aerosol-type container into the cup means after filling the cup means with hot water. An applicator member may then, if desired, be positioned within the cup means for receiving and entrapping the lather such that the same will be submerged under the hot water introduced into the cup means. If the applicator is used, the entrapped lather is retained within the hot water in the cup means until the lather has been heated to the desired extent, whereupon the applicator and lather may be removed for use as in the second embodiment described above.

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

FIGURE 1 is a fragmentary elevational view, partly in cross-section, of one embodiment of the invention;

FIGURE 2 is a fragmentary perspective view, partly in cross-section, of another embodiment of the invention;

FIGURE 3 is a sectional view of still another embodiment of the invention;

FIGURE 4 is a sectional view of the arrangement of FIGURE 3 further illustrating the operation of the invention; and,

FIGURE 5 is a sectional view taken in the direction of arrows 5—5 of FIGURE 3.

Referring first to FIGURE 1, there is shown an aerosol-type container 10 for a shaving lather and including a push button dispenser assembly 11. The container 10 is shown in a position for injecting lather L into a cup 12. In practice the cup 12 may comprise the cup member normally positioned on the container 10 so as to enclose the dispenser assembly 11.

In accordance with the invention, lather may be injected into the cup 12 and hot water from a faucet 13 then received in the cup for heating and moistening the lather L. Upon filling the cup 12 with hot water to a level such as shown at 14, the lather will float to the water surface as shown in dotted lines at L'. It will be apparent that the lather may be permitted to remain in direct contact with the hot water until the temperature of the lather rises to substantially that of the hot water, whereupon the user may simply scoop the lather from the water surface and apply the heated lather to his face for shaving.

Referring now to FIGURE 2, there is shown a modified method and means for providing a heated and moistened lather. An aerosol-type container 15 includes a push button dispenser assembly 16 for injecting lather L into an applicator 17. The applicator 17 includes a cylindrical sidewall 18 and an end wall 19. A handle 20 is secured to the end wall 19 to provide a convenient means for gripping the applicator. The end wall 19 includes a plurality of openings 21 passing therethrough for purposes to be described.

In operation, lather is injected into the applicator 17 which is then inverted and positioned within a cup 22 as shown in dotted lines at 17' with the lather retained therein as shown at L'. Hot water may then be caused to flow from a faucet 23 into the cup 22 to a level shown at 24 to submerge the lather L'. The openings 21 insure that the hot water will enter the applicator to
rectly contact the lather therein for heating and moistening the same.

Upon sufficient heat transfer from the water to the lather, the applicator is removed from the cup 22 and inverted, whereupon the lather may be scooped from the applicator and applied to the face of the user. It has been found that the lather adheres to the interior of the applicator such that all of the lather is removed from the cup upon removal of the applicator as above described.

In the foregoing arrangement, it is apparent that the applicator 17 provides a convenient means for "handling" the lather, and moreover, serves to entrap the lather under the hot water when the applicator is positioned within the cup to thus provide more efficient heat transfer from the hot water to the lather.

Referring now to FIGURE 3, there is shown another embodiment of the invention wherein an aerosol-type shaving lather container 25 is shown with the conventional push button assembly removed to expose the push-stem valve 26. Shown positioned above the container 25 is a cup 27 having an inlet vapor assembly 30 mounted to the bottom thereof. An applicator 29 may be positioned within the cup 27, all for purposes to become clearer as the description proceeds.

The push-stem valve 26 includes a tube 30 extending from within the container 25 into coupled relation with a guide member 31. The guide member 31 includes an opening 32 defined therein in communication with the tube 30. A push-stem member 33 is positioned for vertical movement with respect to the guide member 31 and includes an annular shoulder 34 for seating against an annular gasket 35 fixed within the top portion of the valve as shown. A coil spring 36 is interposed between the bottom portion of the member 33 and the lower end of the push-stem member 33 for normally biasing the push-stem 33 upwardly to position the shoulder portion 34 into engagement with the gasket 35.

The push-stem 33 includes a transverse inlet passage 37 defined therein just above the shoulder 34 and communicating with a longitudinally directed passage 38 passing centrally through the push-stem 33. The push-stem 33 further includes a pair of diametrically opposed transverse outlet passages 39 and 40 across the top end thereof for purposes to become clearer as the description proceeds.

The inlet valve assembly 28 of the cup 27 includes an annular bottom member 41 secured at its periphery to an outlet tapered tube member 42 fitted through the bottom of the cup as shown. A flexible diaphragm 43 is positioned within the valve assembly 28 and includes an annular flange 47 which defines an opening 48. As shown, the annular flange 47 defines a seating for the enlarged central portion 45 of the diaphragm 43 to closely match the opening 48. As best shown in FIGURE 5, the diaphragm 43 includes a plurality of circumferentially spaced holes 49 passing through the disc portion 46 for purposes to be described.

Referring still to FIGURE 3, the applicator 29 may be identical in construction with the applicator 17 shown in FIGURE 2. Accordingly, the applicator 29 includes a cylindrical sidewall 50 and an end wall 51, to which is secured a handle 52. The applicator 29 also includes a plurality of circumferentially spaced openings 53 defined through the end wall 51.

As in the case of the cups 12 and 22 of FIGURES 1 and 2, the cup 27 in FIGURE 3 may comprise the "cap" for the container 25 when the same is being stored.

Referring now to FIGURE 4, the operation of the embodiments of FIGURES 3 and 5 will be described. The cup 27 is removed from the container, inverted, filled with hot water, and its central opening defined by the annular seating 48 positioned over the push-stem 33. Upon downward movement, it will be seen that the top of the push-stem 33 engages the diaphragm 43 to unsheathe the same. At the same time, the push-stem 33 is moved downwardly against the spring 36 to thus position the opening 37 below the sealing gasket 35. The pressurized lather within the container 25 is thus permitted to flow therefrom in the following manner: upwardly through the tube 30; through the opening 32; into the passage 38; upwardly through the passages 39 and 40; upwardly through the holes 49; through the outlet tapered tube 42; and then into the cup 27 to mix with the water within the cup.

The flow of lather as above described may be stopped by simply lifting the cup 27 from the container 25 whereupon the valve assemblies 26 and 28 will automatically close as shown in FIGURE 3.

Alternatively, the lather may be introduced before filling the cup with hot water and the applicator 29 used to remove the lather. With the lather I retained within the cup and applicator as shown in FIGURE 4, hot water may then be added from a faucet 54 until the lather is submerged to thus absorb heat from the water. The applicator 29 is then removed from the cup 27 and inverted, whereupon the lather may be scooped from the applicator and applied to the face of the user. It will be apparent that the members 31 and 33 function in much the same manner as the applicator 17 shown and described with reference to FIGURE 2.

From the foregoing it is apparent that the several embodiments of the invention provide heated and moistened lather by a simplified method and means without requiring any significant modifications of the shaving lather container. Accordingly, the invention substantially reduces the costs of manufacture and assembly below those of prior art devices. Moreover, the invention enables the lather to be heated to the desired extent thus affording shaves of maximum ease and comfort.

What is claimed is:

1. A means for heating and moistening lather from an aerosol-type container, comprising: a cup for receiving a quantity of lather and hot water; and an applicator member comprising a cylindrical side wall and upper end having an outer diameter substantially equal to that of said cup for entrapping the lather in said water for a given period of time sufficient to heat the lather to a temperature corresponding substantially to the temperature of said water, said end wall including a plurality of openings and a central handle extending upwardly to facilitate insertion of said applicator and the moistened lather entrapped therein.

2. The subject matter of claim 1, in which said aerosol-type container includes a push-stem valve and in which said cup includes normally closed inlet valve assembly in its bottom for admitting lather from said container into said cup and said applicator automatically in response to urging of said inlet valve assembly against said push-stem valve of said aerosol-type container.

3. A means for heating and moistening lather from an aerosol-type container having a push-stem valve at its upper end for ejecting lather in response to movement of said push-stem, said means including a cup having its open end receivable over said push-stem valve to serve as a cap for said container, said cup being removable from said container such that it can be inverted and filled with hot water, the bottom of said cup including a normally closed inlet valve assembly including: a flexible diaphragm; and an annular seating defining an opening underling and normally closed by the central portion of said diaphragm, said diaphragm including holes circumferentially spaced outside of said annular seating such that communication is provided through said opening and holes to the inside will be described.
upon downward movement of said cup, said push-stem lifts said diaphragm to open said normally closed valve assembly, further downward force of said diaphragm against said push-stem operating said push-stem valve of said container to thereby permit lather from said container to be received in said cup.

4. The subject matter of claim 3, in which said valve assembly includes a tapered tube having a larger lower inlet end overlying said holes and central portion of said diaphragm and a smaller upper outlet end centrally positioned in said cup above the bottom of said cup.

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