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MEANS FOR HEATING SHAVING LATHER

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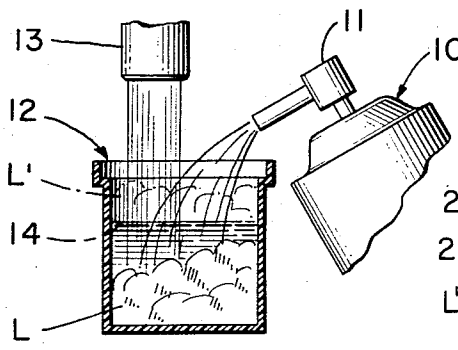


FIG. 1.

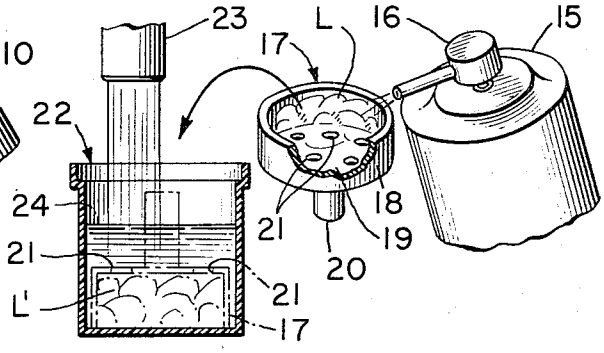


FIG. 2.

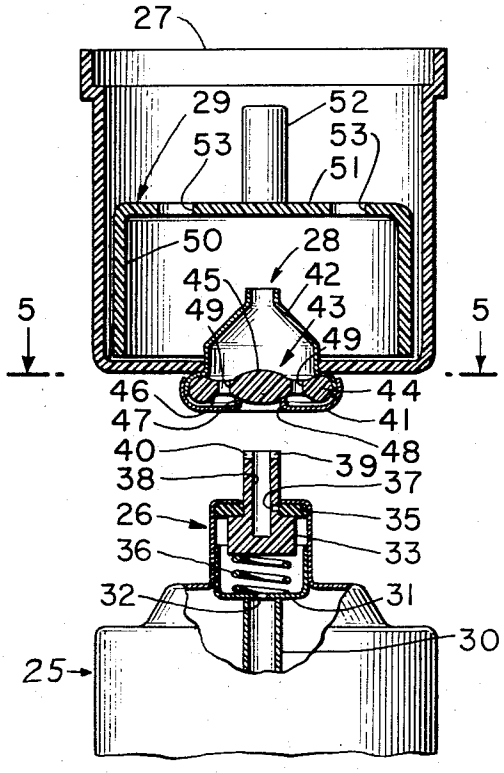


FIG. 3.

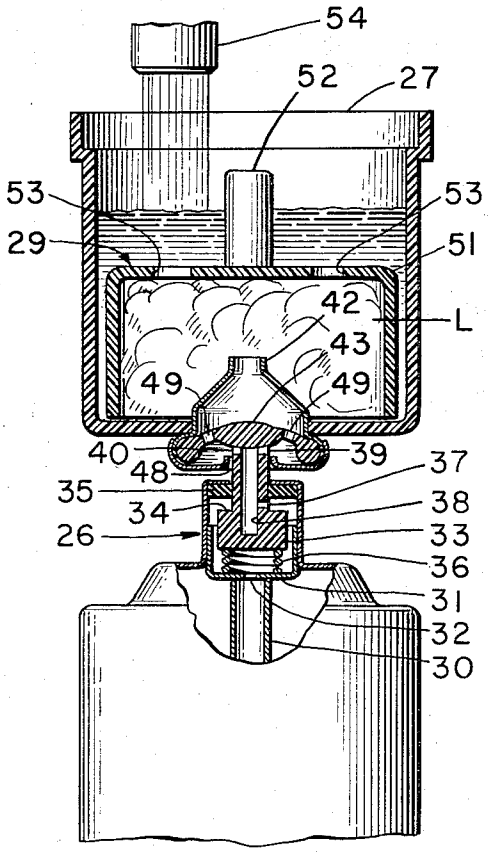


FIG. 4.

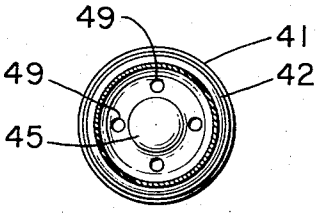


FIG. 5.

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MEANS FOR HEATING SHAVING LATHER

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ABSTRACT OF THE DISCLOSURE

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 lather 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 moistening 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 cap 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 substanially 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 di-

rectly contact the lather therein for heating and moistening the same.

Upon sufficient heat transfer from the water to the lather, the appliactor 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.

With the foregoing arrangement, it is apparent that the aplicator **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 valve assembly **28** mounted in 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 valve 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 **31** 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 peripheral ring portion **44** secured at the juncture of the members **41** and **42**. The diaphragm **42** further includes an enlarged central portion **45** joined to the ring portion **44** by an integral annular disc portion **46**.

The bottom member **41** includes an annular seating 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 normally close 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 embodiment 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 unseat 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 **37**; upwardly through the passage **38**; outwardly 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 L 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 applicator **29**, in this mode of operation, functions 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 wall to define a smaller inverted cup shape receivable within 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 removal 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 under 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 comprising: a flexible diaphragm; and an annular seating defining an opening underlying 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 interior of said cup when said diaphragm is lifted from said opening, whereby upon positioning of said opening over said push-stem valve of said container and

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.

References Cited

UNITED STATES PATENTS

2,805,003	9/1957	Ayres	222—402.13
3,111,967	11/1963	Bullard	222—146
3,258,170	6/1966	Ayres et al.	222—146
3,258,171	6/1966	Reich et al.	222—146
3,300,095	1/1967	Marraffino	222—146
3,300,145	1/1967	Marraffino	239—304 X

WALTER SOBIN, *Primary Examiner.*