United States Patent [19]

Pass

[11] **3,783,511**

[45] **Jan. 8, 1974**

[54] **LATHER DISPENSING SHAVING INSTRUMENT**

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[22] Filed: **Mar. 10, 1971**

[21] Appl. No.: **122,686**

[52] **U.S. Cl.** **30/41,** 30/86

[51] **Int. Cl.** **B26b 21/44,** B26b 21/52

[58] **Field of Search** ..... 30/34 R, 41, 41.5, 30/86, 90; 222/146 HA, 402.11, 402.15; 251/107, 109

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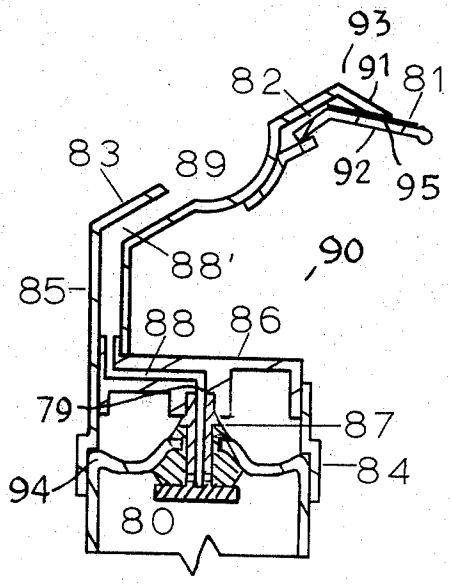
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Primary Examiner—Othell M. Simpson
Assistant Examiner—Gary L. Smith

[57] **ABSTRACT**

The basic elements for shaving the face, a razor, a lather dispensing container, a lather spreading surface and an optional heat transfer device are combined into one operable unit with each element functionally cooperating together to form an Integrated Shaving Instrument.

1 Claim, 7 Drawing Figures



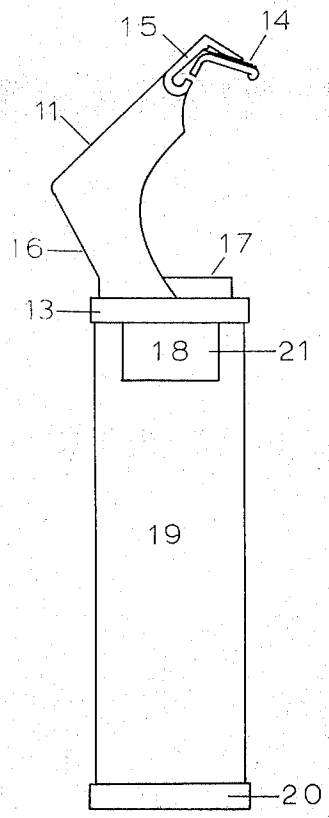


FIG. 1

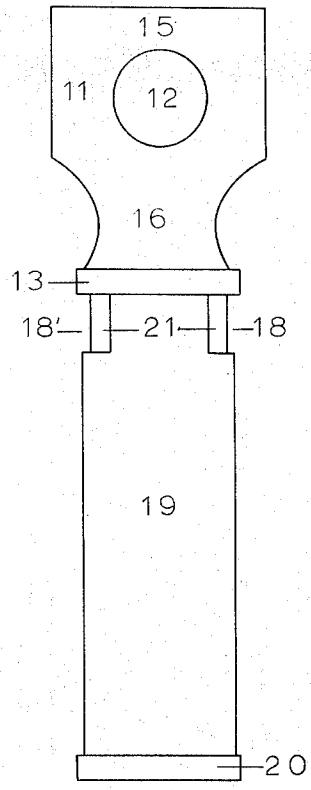


FIG. 2

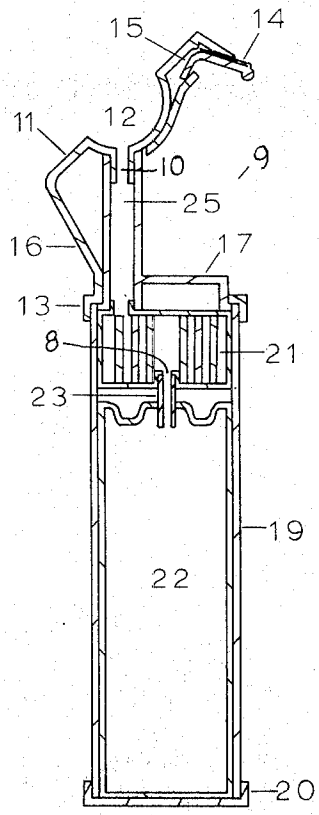


FIG. 3

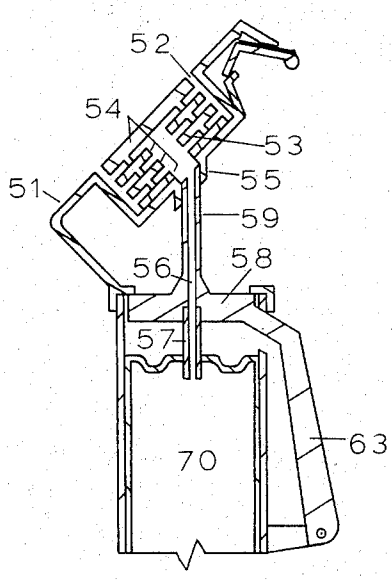


FIG. 4

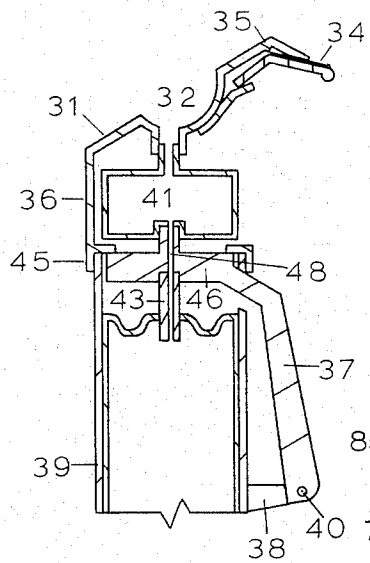


FIG. 5

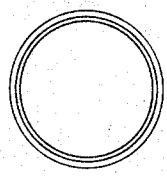


FIG. 6

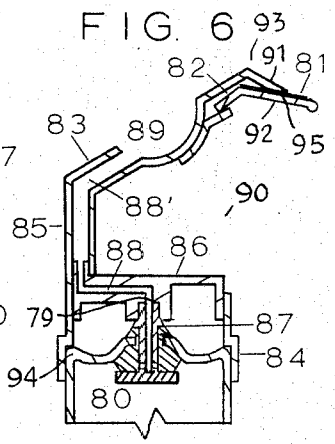


FIG. 7

LATHER DISPENSING SHAVING INSTRUMENT

BACKGROUND OF THE INVENTION

1. Field of the Invention

Dispensing, particularly from aerosol containers (class 222, dispensing), the simultaneous spreading of the dispensed material (class 118, coating apparatus), dispensing with heating or cooling means (class 222, subclass 146) and shaving, particularly from a razor (class 83, cutting).

2. Description of the Prior Art

The prior art includes, shave cream lather dispensing aerosol containers having a valve for regulating the flow of lather through an orifice with means of actuating the valve, an applicator for the spreading of lather on the face or other parts of the body adaptable for attachment to the aerosol container, heat transfer devices for heating the lather, and razors for shaving the face or other parts of the body. These elements have been combined into one coacting unit which can be held in and operated with one hand thus greatly facilitating the task of shaving and eliminating the clutter associated with shaving.

SUMMARY OF THE INVENTION

A razor is provided which is attachable either to a tubular handle which is capable of housing an aerosol container or directly to an aerosol container which then forms the handle of the razor. A floating pressing plate is provided with or without a lever to provide means for actuating the aerosol valve. Upon actuation, lather is conducted by a passage to the lather spreading surface which is formed integrally with the razor blade holding means. The passage can be adapted to house a heat transfer device.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a side view of an integrated shaving instrument incorporating a heat transfer device in the tubular handle.

FIG. 2 is a front view of FIG. 1.

FIG. 3 is a cross sectional view of FIG. 1 showing how the various elements coact together.

FIG. 4 is a cross sectional view of an alternate integrated shaving instrument incorporating a heat transfer device in the lather spreading surface.

FIG. 5 is a cross sectional view of an alternate integrated shaving instrument incorporating a heat transfer device between the lather spreading surface and the tubular handle.

FIG. 6 is a cross sectional representing the preferred shape of the handles of the integrated shaving instruments shown.

FIG. 7 is a cross sectional view of an alternate integrated shaving instrument differing from the others in that the optional heat transfer device is lacking and that the handle is formed from the aerosol container.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIG. 1 is a side view of an integrated shaving instrument which illustrates the basic features of the device. A razor blade **14** is held in the razor blade holding means **15.** The razor blade holding means **15** is supported by an integral with the lather spreading surface **11** which is connected to a circular flanged collar **13** by the gooseneck **16.** A tubular handle **19** is designed to

act as a handle for the shaving instrument and also as a housing for an aerosol container. The pressing plate **17** is capable of actuating an aerosol valve by downwards action. The opening **18** in the tubular handle **19** serves to expose the heat transfer device **21** to a supply of hot water to heat it. A cap **20** is removably attached in order to provide a means for replacing the aerosol container.

FIG. 2 is a front view of the integrated shaving instrument in FIG. 1 which shows the lather spreading surface **11** surrounding an expansion chamber **12** which surrounds the downward extending passage **10.** The gooseneck **16** connects the lather spreading surface **11** to the circular flanged collar **13** which serves as a means of attaching the shaving instrument to the tubular handle **19.** The openings **18** and **18'** in the tubular handle **19** provide an access for a hot water supply to heat the heat transfer device **21.**

FIG. 3 is a cross sectional view of FIG. **1.** It shows the aerosol container **22** enclosed in the tubular handle **19.** The heat transfer device **21** engages the aerosol valve stem **23.** The pressing plate **17** engages the heat transfer device **21.** The gooseneck **16** is sufficiently open on one side (reference numeral **9** indicates area of opening) to allow finger access to the pressing plate **17.** When the pressing plate is depressed, the downward motion is transmitted through the heat transfer device **21** and the aerosol valve is actuated. The pressing plate **17** is in such coacting relationship that lather than flows from the orifice **8** of the aerosol valve stem **13,** through the heat transfer device **21,** through the passage **25,** through the passage **10** and onto the lather spreading surface **11** from where it can be spread on the face or other parts of the body.

FIG. **4** is an alternate embodiment of the invention in which a heat transfer device **53** is installed in the depression provided by the expansion chamber **52** located in the spreading surface **51.** There is sufficient clearance between the heat transfer device **53** and the expansion chamber **52** to provide a relatively free flow of hot water to heat the plates **54** of the heat transfer device. The top surfaces of the spreading surface **51** and the plates **54** which may come into contact with the skin can be coated or composed of an insulating material to protect the skin from excess heat. The applicator is operated by applying finger pressure on the lever **63.** The lever **63** is an extension of the floating pressing plate **58** which has a passage **56** which engages the aerosol valve stem **57** and conducts the lather from the aerosol container **70** to the expansion chamber **52.** The tube **59** of the passage **56** engages the collar **55** of the expansion chamber **52** with a slide fit to permit freedom of motion of the floating pressing plate **58** in response to pressure on the lever **63** which causes actuation of the aerosol valve. Lather then flows into the heat transfer device **53** and out onto the spreading surface **51** from where it can be applied to the face or body. A smooth flow of lather can be obtained by proper manipulation of lever **63.**

FIG. **5** is an alternate embodiment of the invention in which a heat transfer device **41** is located directly under the spreading surface **31** which has an expansion chamber **32.** This permits a more compact arrangement and results in a simplified direct flow of lather. A floating pressing plate **46** engages the aerosol valve stem **43** in the passage **48** which conducts the lather to the heat transfer device **41** and the spreading surface

31. The lever arm 37 is attached to the floating pressing plate 46. Finger pressure on the lever arm 37 results in actuation of the aerosol valve. With this type of actuating mechanism an aerosol valve responding to either downward motion or tilt motion can be actuated. A blocking extension 38 is pivotable on the lever arm 36 by the pin 40. When positioned against the tubular handle 39 the blocking extension 38 prevents motion of the lever arm 37 and acts to prevent accidental actuation of the aerosol valve. A razor blade 34 is supported by the razor blade holding means 35 which is integral with the spreading surface 31. The spreading surface 31 is connected to the collar 45 by the goose neck 36. The collar 45 serves as a means of attaching the razor to the tubular handle 39.

FIG. 6 is a cross sectional to represent the preferred shape of the handles of the integrated shaving instruments shown.

FIG. 7 is a cross sectional view of an alternate embodiment of an integrated shaving instrument in which the shaving instrument is attachable to the aerosol container 80 which serves as the handle. The razor blade 81 is held by the razor blade holder 82 which consists of an openly accessible slot 95 having upper and lower surfaces, 91 and 92, respectively, for gripping said razor blade 81 securely. Said razor blade holder 82 is supported by, integral with and located at the extremity 93 of the lather spreading surface 83 which surrounds the expansion chamber 89. Said lather spreading surface 83 tapers down to a gooseneck 85 and terminates in a circular flanged collar 84 designed to attach to the top flange 94 of said aerosol container 80. The gooseneck is sufficiently open on one side (reference numeral 90 indicates area of opening) to allow finger access to the pressing plate 86, which lies within said circular flanged collar 84. The passage 88 lying within said pressing plate 86 is in a lather coacting relationship with the orifice 79 of the aerosol valve 87, and with the passageway 88′ which extends longitudinally along the inside of both said gooseneck 85 and said lather spreading surface 83 to and open to said expansion chamber 89. Finger pressure on said pressing plate 86 causes actuation of the aerosol valve 87 responding to downward motion and/or tilt motion. Lather will flow from the orifice 79 of the aerosol valve 87 through the passage 88, through the passageway 88′, into the expansion chamber 89 and onto the spreading surface 83 where the lather can be spread on the face or other parts of the body.

It will be understood that various deviations or alternations in the design and arrangement can be made without departing from the scope of the invention.

The small aerosol container holds an ample supply of lather for three or four weeks of daily shaving and is easy to replace or refill.

The integrated shaving instrument will be especially convenient for traveling since all elements for shaving are combined into one operable unit and there is nothing to forget.

It should be understood that the expansion chambers shown are very specialized areas of the (discharge) passage. Besides providing an area in which the lather can expand controllably they also provide a reservoir where the lather can accumulate in quantity before being applied to the face. Thus, the expansion chambers can take many different forms from a depressed area to a multiplicity of openings in the spreading surface and still function properly.

It should be understood that the invention is not to be limited to the particular embodiments disclosed, as these are intended to be illustrative of the invention. For instance, there are many different types of razors, heat transfer devices and valve actuating mechanisms not shown in the drawings which will function as adequately as those shown. However, these are obvious, lack novelty (in reference to this invention) and would provide no additional substantial usefulness. It also should be noted that some advantages may be gained by using particular embodiments of the disclosed ideas and/or prior art in combinations not shown with each other. Undue multiplicity would result from trying to show every possible combination.

I claim:

1. An integrated shaving instrument comprising in combination: a lather dispensing aerosol container having an aerosol valve and orifice; a razor blade holder, consisting of an openly accessible slot having upper and lower surfaces for gripping a razor blade securely, said razor blade holder supported by, integral with and located at the extremity of a lather spreading surface which surrounds an expansion chamber, said lather spreading surface tapering down to a gooseneck and terminating in a circular flanged collar which is attached to the top flange of said aerosol container, said gooseneck being sufficiently open on one side to provide finger access to a pressing plate lying within said circular flanged collar, a passage within said pressing plate in lather coacting relationship with said orifice of said aerosol valve of said aerosol container and with a passageway extending longitudinally along the inside of both said gooseneck and said lather spreading surface to and open to said expansion chamber, so that, when said aerosol valve is actuated by finger pressure on said pressing plate, lather will flow from said orifice of said aerosol valve of said aerosol container through said passage of said pressing plate, through said passageway, into said expansion chamber and onto said spreading surface.

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