Feb. 1, 1966 W. A. GAINES 3,231,923

MAGAZINE TYPE SHAVING BRUSH

Original Filed July 29, 1955

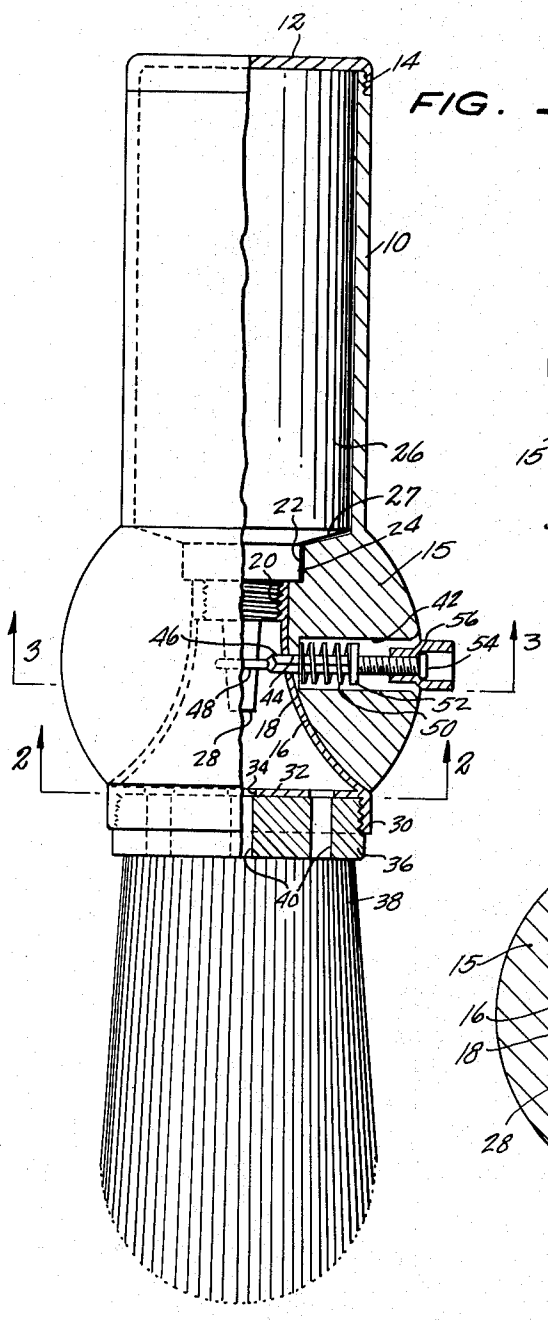


FIG. 1.

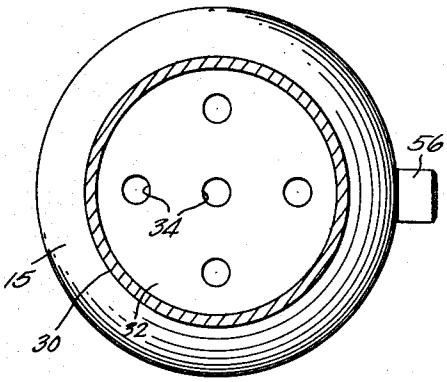
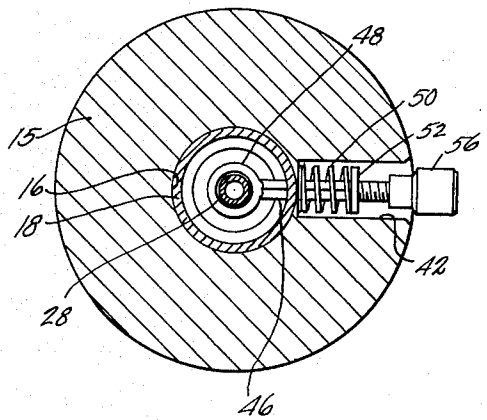


FIG. 2.

FIG. 3.



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MAGAZINE TYPE SHAVING BRUSH

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2 Claims. (Cl. 15—552)

It has heretofore been proposed to provide containers holding under pressure a substance adapted, when released by operation of a suitable valve, to form a lather, and lathering materials so packaged have gained widespread commercial favor in recent years. The practice is, however, to apply the lather to the face with the fingers, and this, to many, is an undesirable feature of a shaving material of this type. Hence, those men who prefer to apply a shaving lather by means of a brush have, in general, refrained from use of a lathering substance confined under pressure. Further, the use of a shaving brush has the advantage that it warms the lather when the same is being applied, in view of the practice of first immersing the bristles of the brush in warm water.

The main object of the present invention, in view of the above, is to provide a combination dispenser for lather with said dispenser being of the type that maintains the lathering substances under substantial pressure. It is proposed, in carrying out this main object of the invenion, to provide a device of the nature referred to which will save time, by directing into the brush a quantity of lather responsive merely to depression of a conveniently located button provided on the brush handle. It is further proposed to provide a device as stated wherein the lather will be automatically warmed for use as it enters the bristles, assuming that the bristles of the brush have previously been immersed in hot water.

Still further, it is an object of the invention to provide a combination device as stated which will save space when not in use, due to the assembly of a shaving brush with a lathering dispenser where heretofore these have been separated articles.

Other objects will appear from the following description, the claims appended thereto, and from the annexed drawings, in which like reference characters designate like parts throughout the several views, and wherein:

FIGURE 1 is a view partly in side elevation and partly in longitudinal section of a combination device formed according to the present invention;

FIGURE 2 is a transverse sectional view on 2—2 of FIGURE 1; and

FIGURE 3 is a transverse sectional view on line 3—3 of FIGURE 1.

The reference numeral **10** designates a housing of cylindrical formation formed open at its outer end. A closure cap **12**, having a peripheral, internally threaded flange, is engaged with a reduced, threaded extension **14** formed upon the outer end of the housing.

As its inner end, the housing **10** is integral with a bulbous body portion **15** of the handle, and said body portion, at the end thereof remote from its integral connection to the housing **10**, is formed with an outwardly flaring opening **16** in which is engaged fixedly a complementarily flared, funnel-like liner, defining within the body portion a chamber into which the lather is forced when released from the cartridge or container in which said lathering substance is maintained normally under pressure, awaiting use.

At its end, the liner **18** is formed with internal threads **20**, and the threaded inner end portion of the liner is in communication with a counterbore **22** of the body portion **15**, communicating in turn with the interior of the housing **10**.

The counterbored portion **22** of the body portion **15** is adapted to receive a neck portion **24** provided upon a cartridge or container **26**, which completely fills the housing and bears against abutment **27**, and is adapted to hold a quantity of a lathering substance under pressure. Said cartridge is formed with a threaded, reduced extension provided upon the neck **22**, threadedly engageable with the threads **20**, and said extension in turn merges into a tapering, elongated nozzle **28** extending axially within the liner **18**, so as to discharge the lathering substance within the chamber of the body portion. The nozzle is of the type which is adapted to be normally maintained in the position thereof shown in FIGURE 1, but which is nevertheless capable of being laterally tilted, for the purpose of opening a valve, not shown, provided within the cartridge, thus to release the lathering substance. The manner in which the nozzle is tiltably mounted, and the valve construction that results in discharge of the contents of the cartridge when said nozzle is so tilted, are known per se in the art of dispensing substances under gaseous pressure, nozzles and valves of this type being already in use on containers used for the purpose of dispensing whipped cream or equivalent foods, and being also in use on containers in which shaving cream is dispensed.

At its larger end, the liner **18** is integral with a circumferential, depending, internally threaded flange **30**, and said larger end of the liner is formed with an end wall **32** having a plurality of openings **34** (see FIGURE 2). Threadedly engaged within the flange, and bearing tightly against the end wall, is the flat, circular head **36** of a brush element provided with bristles **38**. Formed in the head **36** are openings **40** registering with the openings **34** of end wall **32**.

In the side of the body portion **15** there is formed a radially extending recess **42**, said recess terminating, at its inner end, adjacent the shaving-cream-receiving cavity. At its inner end, the recess is in communication with a relatively small passage **44** of non-circular cross section, within which is slidably engaged a plunger **46** of complementary cross section. Plunger **46** projects into the shaving-cream-receiving cavity or chamber of the body portion **15**, and is formed at its inner end with an eye **48** receiving the tapered nozzle **28**.

Circumposed about the plunger **46** within the recess **42** is a compression, coil spring **50** abutting at one end against the inner wall of the cavity **42**, and at its opposite end against a collar **52**. Collar **52** is fixedly secured to the plunger intermediate opposite ends thereof, and the outer end portion of the plunger is threaded and terminates at its outer extremity in a circumferential flange **54**. Flange **54**, in the expanded condition of the spring **50** shown in FIGURE 1, is disposed approximately flush with the curved surface of the body portion **15**.

Threadedly engaged with the outer end portion of the plunger is a knob **56**, the outer end portion of which is enlarged in diameter and recessed to receive the flanged extremity **54** of the plunger. The axial recess in which said extremity of the plunger is disposed in the knob merges into a threaded, reduced axial bore of the knob in which the outer end portion of the plunger is engaged.

By reason of this construction, the knob is adapted to be threaded in an axial direction upon the plunger, inwardly from the use position shown in FIGURE 1. When the device is not in use, it is desirable to prevent accidental depression of the plunger, since this will cause a dispensing of the lather. Therefore, under these conditions, the knob is threaded inwardly within the recess **42**, until its outer end is substantially flush with the curved outer surface of the body portion. With the knob threaded inwardy in this manner, there is a minimum amount of projection of the plunger from the body portion **15**, and hence, accidental

depression of the plunger, if not completely eliminated, is at least rendered difficult.

Subsequently, when the device is again to be used, the knob is threaded outwardly to its FIGURE 1 position, and is now disposed where it will be capable of being depressed conveniently by a user whose hand is grapsing the handle constituted by the housing **10**, with the thumb free to depress the knob.

By reason of the construction illustrated and described, it will be seen that the following initial purchase of the combination lather dispenser and brush, one may, on exhaustion of each cartridge **25**, purchase a new cartridge, which is readily insertable within the housing, in substitution for the old cartridge. The closure cap is then threaded onto the housing **10**, and the device is again ready for use.

In use of the device, the bristles **38** will be first immersed in hot water, and then, the knob **56** is pressed to shift the plunger **46** to the left in FIGURE 1. This in turn exerts a lateral pressure on the nozzle **28**, causing the valve of the cartridge to be opened. A valve of a cartridge of this type is conventionally provided with spring means or its equivalent, stressed to return the nozzle to the axial position thereof, to close the valve, and the spring **50** is further adapted, each time the valve is opened, to return the nozzle to its closed position. Thus, the opening and closing of the valve is assured, and with the construction illustrated, in fact, a cartridge designed especially for use in the device may be equipped with a valve that is not inherently adapted to return to closed position, since each time the knob **56** is released, the spring **50** discharges the function of returning the nozzle to its FIGURE 1, valve-closing position.

In any event, when the knob **56** is depressed, the substance held under pressure within the cartridge is dispensed, in an amount determined by the length of time the knob is held depressed, into the chamber defined by the funnel-like liner **18**, and passed through said chamber and into the bristles, through the registering openings **34**, **40**.

In this way, as the brush is manipulated to apply the latter to the face, one can periodically force a foamy lather under pressure into the bristles, so that on the continued movement of the bristles over the face, the lather will be uniformly spread and worked into the beard.

The construction, as will be appreciated, provides a combination of a shaving brush of substantially conventional size, with an insert or cartridge to which a lathering substance is maintained under pressure, the arrangement being one which permits a substantial saving of time in the operation of appying the lather to the face, and further warms the lather for use. Still further, application of the lather by hand or the making of the lather by hand is eliminated, and substantial space is saved by reason of the combination of both of these normally separated articles in a unitary device.

If desired, a cover may be provided, to enclose the bristles when the shaving brush is not in use, or when the brush is being packed in a traveling bag. Such a cover would be so designed as to be readily fitted over the head **36** of the brush and the flange **30**, and may be equipped with means interengaging with complementary means on said head and/or flange for securing the cover against accidental removal.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. A combination lather dispenser and shaving brush comprising a housing in the shape of a brush handle; a body portion rigid with the housing at one end thereof and having a central cavity; a brush head connected to the body portion and having a plurality of apertures communicating with said cavity, said brush head including bristles into which lather forced through the apertures will be directed; a removable cartridge inserted in said housing and having a nozzle projecting into the cavity, said nozzle when in one position thereof preventing dispensing of the contents of the cartridge and when in another position thereof permitting the cartridge contents to be forced into the cavity, said cartridge holding a quantity of shaving material under pressure and a plunger slidably mounted in said body portion and projecting at one end into said cavity, said plunger at said one end thereof being adapted to engage the nozzle for shifting the nozzle to a shaving-substance-releasing position, the plunger at the other end thereof including a knob adapted to be depressed by a user, said knob being threadly mounted upon the plunger for adjustment in an axial direction upon the plunger, the body portion having a recess adapted to receive the knob in one position to which the same is threadly adjusted so as to recess the knob within the body portion when the brush is not in use.

2. A dispenser for a fluid maintained under pressure comprising an elongated cylindrical housing, a body portion rigid with said housing at one end of the housing, the other end of the housing being formed open, a removable closure cap for the open end of the housing, the housing containing a cartridge holding a quantity of fluid under pressure, said closure cap preventing movement of the cartridge in an axial direction out of the housing, the body portion being formed at the location of its connection to the housing with an abutment engaging the other end of the cartridge to prevent axial movement of the cartridge in the opposite direction, said body portion being formed with a flared center cavity opening upon that end of the body portion remote from the housing and communicating at the smaller end of the cavity with the interior of the housing, the cartridge including a valve means and also including an axially disposed nozzle projecting into said smaller end of the cavity, said nozzle being mounted to open and close the valve means responsively to lateral tilting of the nozzle in opposite directions and being adapted when disposed axially of the housing and cavity to close the valve means to prevent dispensing of the fluid from the cartridge, and a plunger means shiftable radially inwardly within the body portion transversely of the nozzle and having an eye at its inner end receiving said nozzle for imparting lateral movement to the nozzle, said plunger means being under spring bias tending to shift the same in a direction radially, outwardly of the body portion to normally dispose the nozzle in a position preventing release of the fluid.

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