March 29, 1960 W. W. PEARCE 2,930,060

SCALP BRUSH

Filed Aug. 23, 1954

Fig. 1.

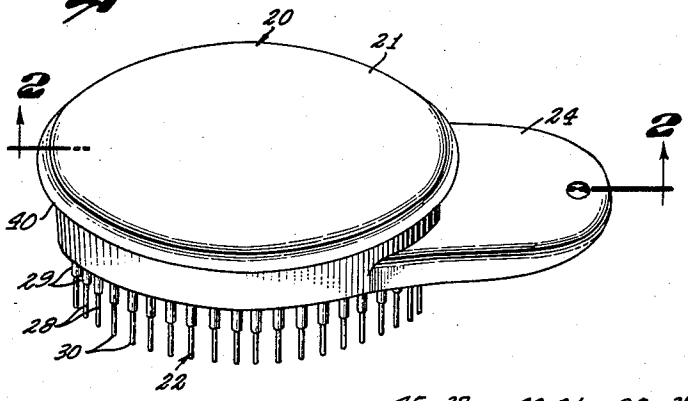


Fig. 2.

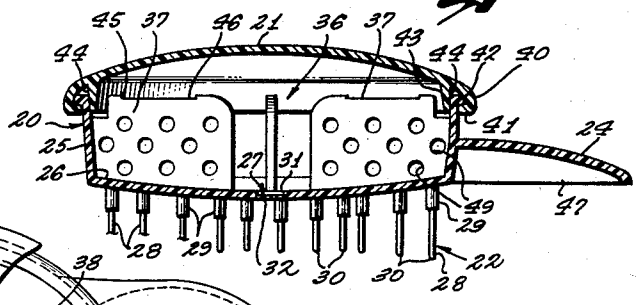


Fig. 3.

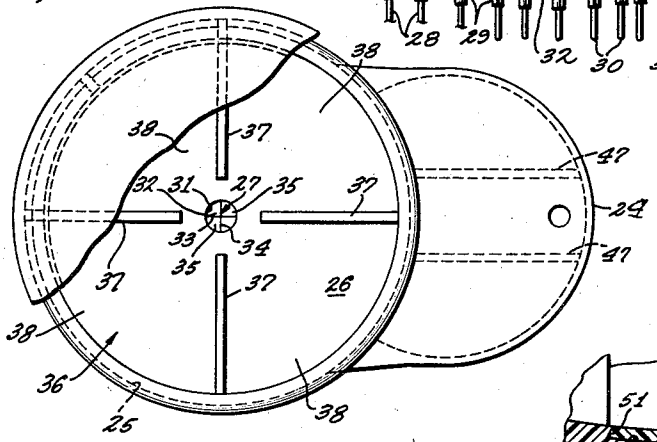


Fig. 4.

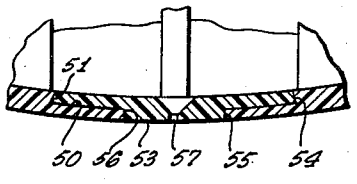
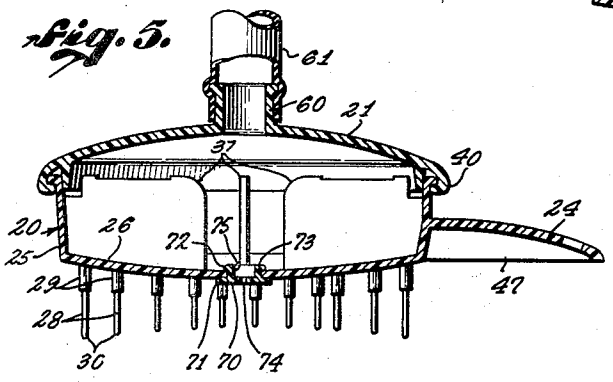


Fig. 5.



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SCALP BRUSH

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2 Claims. (Cl. 15—131)

This invention relates to scalp brushes, and more particularly to a new and improved combination massage and shampoo brush containing a reservoir therein for liquid shampoo or the like, with selective means for introducing the shampoo from the container to a brushing or shampooing portion.

It is an object of the invention to provide a new and improved combined scalp brush and liquid container for conjoint or selective use.

It is another object of the invention to provide a new and improved means associated with a shampoo brush and container for introducing the shampoo from the container to the brush portion.

Another further object of the invention is the provision of a new and improved container construction in combination with a brush of the desired character described.

A still further object of the invention is to provide a new and improved container for a shampoo brush incorporating features for minimizing the sloshing of the liquid shampoo within the container so as to minimize the foaming thereof.

Another further object of the invention is the provision in a container for a brush of new and improved construction, of new and improved bellows-like means, new and improved cap means, and new and improved partition and stop means for the container so as to facilitate manufacture and use of the container portion, affording desired rigidity and limiting the bellows action while facilitating said latter action within predetermined limits.

It is moreover among the objects of the invention to provide improvements over prior art devices heretofore intended to accomplish generally similar purposes, to simplify mass production, and to provide a preferably all-plastic, vinyl-type body, including the bristle portion.

The invention also contemplates the provision of a brush of the desired character described, of new and improved shape and contour facilitating usage and increasing utility.

Other and more specific objects and advantages will appear and be brought out more fully in the following specification and considered with reference to the accompanying drawings throughout which like parts are designated by like numerals.

In the drawings:

Figure 1 is a perspective view of a brush embodying this invention.

Figure 2 is a vertical sectional view taken as on a line 2—2 of Figure 1.

Figure 3 is a top view, parts being cut away.

Figure 4 is a detailed fragmentary view of a second preferred form of brush embodying a plug of interchangeable construction.

Figure 5 is a vertical sectional view of a third form of brush.

Referring more particularly to the drawings, there is shown by way of illustration but not of limitation a combined massage brush and container defining a body portion generally designated at **20**, a top **21**, and a brush or massage portion comprising bristles **22**. A suitable handle **24** may also be included, preferably as shown, integral with and extending radially from the body.

The body **20** has an integral annular downwardly tapered circumferential side-wall **25**, the bottom **26** of which also slopes downwardly toward a central orifice **27**.

A plurality of bristles **28**, of any desired shape, being thicker at their base **29** and rounded at their extremities **30**, are preferably integral with and depending from the bottom **26** of the body.

The orifice **27** is preferably formed as by means of an integral counterbore **31** with a thin-walled portion **32** relative to the thickness of the rest of the bottom **26**, and a pair of diametrical slits **33** and **34** are provided to define four—or any other desired number—of axially flexible fingers **35**, which normally retain the orifice **27** in a closed condition, or substantially so, but which will yield under pressure to release the contents in the form of shampoo normally retained in the container chamber **36**.

The chamber **36** defined by the body **20**, including the annular outer wall **25** and the bottom **26**, is further preferably partitioned by means of radially extending wall portions **37**, for example, which at their outer ends are integral with the wall **25**, and at their bottom ends are integral with the bottom **26** of the body.

Said walls **37**, at their innermost ends, however, preferably terminate in radial spaced relationship from one another, and also in spaced relationship from the center of the brush as defined by the orifice **27**, in order to provide free access for the liquid material contained therein to the orifice **27**.

Said walls **37** also divide the chamber **36** within the body of the brush into a plurality of smaller chambers **38**.

The cover **21** is preferably formed with a dome-shaped central body portion which can be flexed downwardly by manual pressure. The edge **40** of the cover has an inturned flange **41** therearound adapted to be engaged under a complementary outwardly turned bead or marginal flange **42** over which the flange **41** may be yieldably snapped. The cover **21** also preferably is formed with an inwardly spaced annular flange **43** which, together with the flange **41**, defines a recess **44** for the liquid tight containment of the head **42** forming the upper rim of the outer wall **25** of the body of the brush.

The form of the flanges **41** and **42** is preferably such that depression **39** of the cover serves to make the securement of the cover to the body, if anything, more secure than in its normal underpressed condition.

The upper edges **45** of the walls **37** are spaced downwardly from the cover body **21**, and provide a limiting stop against which the cover in its depressed condition **39** engages at the limit of its downwardly deflected position.

In order to conserve material and to render the brush lighter in weight, any suitable notching, undercutting, or reticulation, as **46**, may be employed. The handle **24** may, for similar reasons, be ribbed, as on the underside **47**.

In the use of the form of brush of Figures 1 to 3, any desired amount of liquid shampoo of any selected viscosity, is poured into the body **20** by first removing the cover **21** by disengaging the flanges **41** and **42**, preferably by prying the cover up at one edge, whereupon the whole cover will peel off. When a desired amount of shampoo has been introduced into the body the cover is snapped on and by depressing the same manually to the position as shown in dotted outline at **39** in Figure 2, pressure

will be built up within the chamber **36** forcing the resilient fingers **35** downwardly and opening the orifice at **27** to discharge a desired quantity of the shampoo. Upon release of pressure upon the cover **21**, its resilience will return it to its normal convex appearance, as seen in solid outline in Figure 2. Moreover, the shape of the orifice **27** is such that pressure is preferably required to remove the shampoo from the chamber and discharge the same into the bristle portion **22**, ordinarily directly upon the scalp of the user and during use. Such discharge under pressure tends to form the liquid into suds at the orifice.

While it is generally desired that the shampoo within the container portion of the brush be hindered from slapping and moving freely in a body from side to side of the brush, for which purpose the wall portions **37** are provided, it is also contemplated that by means of suitable holes **49** in the walls **37**, such foaming can be accomplished within the brush body with slight shaking and agitation of the brush intended for the purpose of forming a heavy suds or lather so that the lather, rather than the liquid shampoo may be discharged through the orifice **27**, as preferred by some individuals.

The form of orifice or valve shown at Figure 4 includes a recess **50** in the bottom **26** centrally thereof. Said recess **50** is undercut as at **51** therearound to permit the snapped insertion of an insert **53** therein, said insert **53** being yieldably retained by the undercut **51** and a correspondingly tapered edge **54** of the insert. Said insert further includes a central plug portion **55** adapted to seat within the enlarged central bore **56** in the bottom.

By the latter construction, inserts **53** having orifices **57** of any desired size may be selectively employed. Moreover, if desired, the inserts **53** may be wholly omitted in order that water introduced into the brush through the top **21**, as shown for example in Figure 5, may be used in washing the hair following shampooing. For this purpose, as shown in said Figure 5, for example, the top **21** may be provided with a central nipple **60** to which a plastic or rubber hose **61** attached or attachable to a water source, not shown, may be secured releasably or permanently in any conventional manner.

The outlet, therefore, of the type of Figure 4, may be used interchangeably in a brush of the type of any of the figures by modification of the structure within the skill of the art. One can substitute a cover of the type of Figure 5 for the cover of the type of Figure 1.

In the use of the orifice of the type of Figure 4, the insert **53**, as selected, may be inserted downwardly from the inside of the body **20** with the cover **21** removed. The insert **53** is snapped downwardly into place within the bore **56** and forced to engage the undercut with the outermost edge of the preferably annular insert **53**, at **51** and **54**. In order to remove the insert **53**, it is merely necessary to force the same upwardly with physical pressure, so as to free the edges at **51** and **54**. Another insert **53** may be substituted, or the same left off altogether during rinsing, as aforesaid.

In the embodiments of the Figures 1 through 5, corresponding parts are designated by like reference numerals and are interchangeable as between various features of the invention illustrated in the drawings, or described, within apparent limits.

In Figure 5, however, an insert **70** has an outer enlarged flange **71** adapted to seat against the underside of the bottom **26**, and an upper smaller flange **72** adapted to snap into an opening **73** in the bottom. The orifice of the insert **70** comprises a bore **74** and an upper counterbore **75**. The composition of the insert, as of the brush body, being, as stated, of a vinyl plastic or rubber-like material, permits the insert to be forced upwardly into the opening **73**, or downwardly out of the same by digital pressure, in order that said orifice **74** may be interchanged with its insert, or a larger or smaller size, or omitted altogether for the purposes aforesaid.

Individual bodies **20** may be provided with a plurality of covers **21**, some of which are adapted with hose connections and some of which are closed. In either event, in all forms of the invention, the cover may be depressable and flexible and function in the manner of a bellows, whether the hose connection is on the same or not.

The ends **30** of the bristles, in each of the forms of the invention illustrated, preferably collectively define a concave surface adapted to correspond to the contour of the head of the user.

A material of choice is vinyl plastic, out of which the entire body may be molded as a unit, including the bristles. The top, or cover, **21**, may also be molded of one piece, and the outlet in the bottom of the body may be molded of one or more pieces, or may be integral with the body, depending upon the form of outlet selected.

Although I have herein shown and described my invention in what I have conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the socpe of my invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent structures and devices.

I claim:

1. A shampoo and massage brush comprising a flexible hollow body part having integral bottom and side walls and an open top, a resilient cover for said open top and means securing the same in fluid-tight position on said open top, a plurality of flexible bristles dependingly secured in spaced relation to the outer surface of said bottom wall, a centrally located fluid discharge port opening in said bottom wall, a valve means closing said opening, said valve means opening and closing upon flexing and non-flexing said resilient cover, and a plurality of walls in said body part and upstanding from said bottom wall, said walls being perforated to permit a flow of fluid in said body part therebetween and through said port opening.

2. A shampoo and massage brush comprising a flexible hollow body part having integral bottom and side walls and an open top, a flexible cover for said open top and means securing the same in fluid-tight position on said open top, a plurality of flexible bristles dependingly secured in spaced relation to the outer surface of said bottom wall, a centrally located fluid discharge port opening in the said bottom wall, and a plurality of walls in said body part and upstanding from said bottom wall, said walls being perforated to permit the flow of liquid in said body part therebetween and through said port opening.

References Cited in the file of this patent

UNITED STATES PATENTS

435,606	Jenking	Sept. 2, 1890
827,376	Knickerbocker	July 31, 1906
1,064,641	Halstead	June 10, 1913
1,191,578	England	July 18, 1916
1,433,303	Sampson	Oct. 24, 1922
1,505,442	Stephens	Aug. 19, 1924
1,595,324	Van Sant	Aug. 10, 1926
1,713,756	Hassler	May 21, 1929
2,090,050	Jackson	Aug. 17, 1937
2,116,864	Fehrenbach	May 10, 1938
2,186,140	Kurtz	Jan. 9, 1940
2,296,761	Beckers	Sept. 22, 1942
2,480,097	Holden	Aug. 23, 1949
2,513,772	Amer	July 4, 1950
2,664,226	Gobin	Dec. 29, 1953