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DISPENSING BRUSH

Filed Jan. 29, 1962

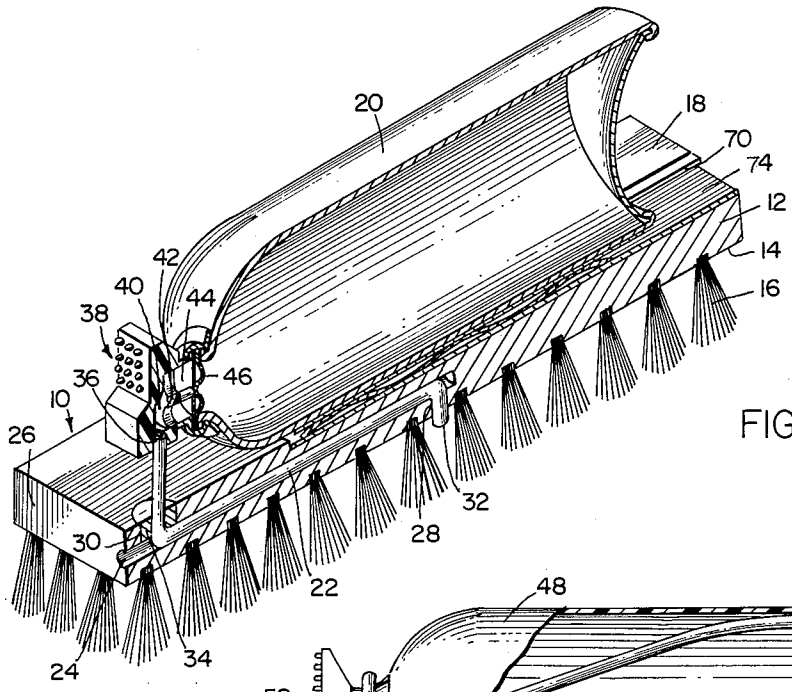


FIG.1

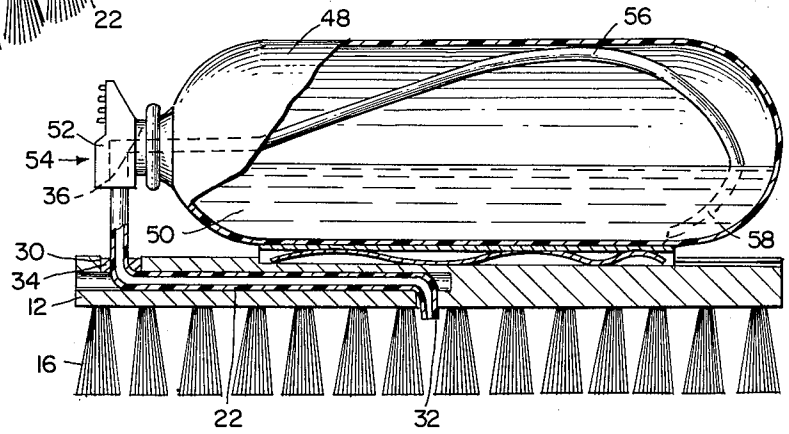


FIG.2

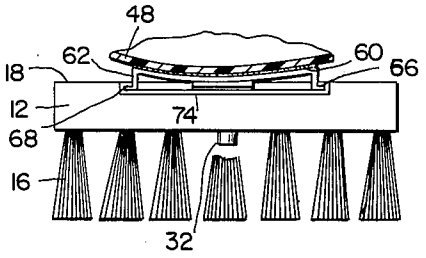


FIG.3

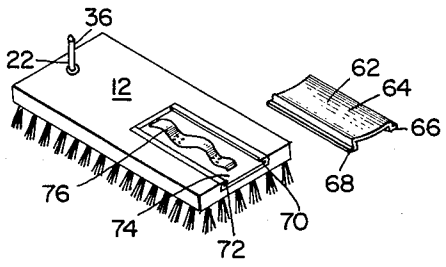


FIG.4

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DISPENSING BRUSH

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This invention relates generally to brushes and similar articles and more particularly brushes of the type having a container associated therewith for the dispensing of a fluid during use of the brush.

It is frequently desirable to provide a brush with means integral therewith for dispensing a fluid during use of the brush. Typical examples of such dispensing brushes would be, for example, a scouring brush with an associated soap solution dispensing container or a hair brush with an associated hair lotion dispensing container.

Accordingly it is an object of the present invention to provide a brush having associated integrally therewith a dispensing container operatively associated with the brush so that the contents of the container may be dispensed during use of the brush.

It is a further object of this invention to provide a dispensing brush from which the fluid container may be removed and replaced as may be desired.

In the practice of the invention in a preferred embodiment thereof a suitable brush is provided with a fluid conduit between the underside of the brush to which the bristles are attached and the upper surface of the brush. A pressure container is removably secured to the upper surface of the brush and the dispensing valve element in the pressure container is placed in communication with the fluid conduit so that upon actuation of the valve element the contents of the container may be dispensed at the undersurface of the brush.

These and other objects and features of the invention will appear as the description proceeds with the aid of the accompanying drawings in which:

FIG. 1 is a view in perspective partially in section of a preferred embodiment of the invention;

FIG. 2 is a side view partially broken away of an alternative embodiment of the invention;

FIG. 3 is a fragmentary section transverse to the brush body showing the means of attaching the container to the brush body; and,

FIG. 4 is an exploded view in perspective showing the means for attaching the container to the brush body.

Turning now to the drawings, in FIG. 1 a brush indicated generally at **10** is shown having a wooden body portion **12** and provided at its undersurface **14** with a plurality of bristles **16** in the conventional fashion. The body **12** is shown constructed of wood although it will be understood that any suitable material may be used.

Positioned upon the body **12** at the upper surface **18** thereof, is a pressurized container **20** here shown of conventional metal design.

In order to receive a dispensing tube **22** hereinafter to be described a passage **24** is provided part way through the body **12** substantially along the longitudinal axis thereof; the passage **24** extends from an end **26** of the body **12** centrally therethrough. At a point substantially at the longitudinal mid-point of the body **12** a passage **26** is provided communicating the passage **24** with the undersurface **14** of the body **12**. A second passage **30** is provided in general vertical alignment with the dispensing nozzle of the container **20** (hereinafter described) communicating the upper surface **18** of the body **12** with the passage **24**.

The dispensing tube **22**, which may be of polyethylene or any suitable flexible material, is inserted through the passages **30**, **24** and **28** respectively until it emerges from the passage **28** to form a slight dispensing nozzle **32**.

It will be found desirable to initially form passage **30** of sufficient radius so that tube **22** may be easily worked through the cooperating passages and therefore it is found desirable to provide an annular stopper member **34** which may be inserted into passage **30** to hold tube **22** securely therein after it is properly positioned.

An upper end **36** of the tube **22** is inserted in a dispensing valve indicated generally at **38** which is integral with the container **20** and which is initially positioned to be in substantial vertical alignment with the passage **30**.

No particular dispensing valve **38** is claimed herein as part of the invention but for purposes of disclosure a dispensing valve **38** having an internal ported baffle member **40** provided with a pin member **42** which passes through a circular plate **44** at the mouth of the container **20** is shown. A flexible spring element **46** is positioned on the opposite side of the plate **44** from the pin **42** and upon axial movement of the valve element toward the container **20** the pin **44** is caused to deflect the spring member **46** permitting the contents of the container to pass through the plate **44** and through the baffle member **40** to the upper end **36** of the dispensing tube **22**. The contents are thereupon passed through the tube **22** and dispensed at the nozzle **32**.

An alternative embodiment of the invention is shown in FIG. 2 in which a manually compressible container **48** is employed in place of the pressurized container **20**. The container **48** is shown of plastic construction and it will be understood that any suitable "squeeze" type bottle will perform satisfactorily.

In the alternative embodiment of FIG. 2 the dispensing valve element **38** which is required with a pressurized container is eliminated and in its place a head **52** is fitted to the container **48**. The upper end **36** of the dispensing tube **22** is fitted into the head **52** and communicates through a passage in the head indicated in dotted lines at **54** with a flexible tube **56** positioned within the container **48**. It will be noted that the tube **56** is of sufficient length that end **58** thereof will normally reside at the lowest portion of the container **48** thereby maximizing the possibility of dispensing the entire contents of the container.

In the alternative embodiment of FIG. 2 it is only necessary to manually compress the container **48** to force a portion of the fluid **50** through the tube **56**, head **52** and tube **22** to the dispensing portion **32** thereof.

The manner of attachment of the container to the brush body is the same in both the preferred and the alternative embodiments and is illustrated in FIGS. 3 and 4.

The container, for example container **48** a portion of which is shown in FIG. 3, is secured, as for example by cement **60** to a collar member **62**. The collar **62** is provided with an upper surface **64** which has a generally concave configuration upon which the generally convex container **48** may rest and to which it may be secured as by cement **60**. The collar **62** is provided with a laterally extending flange **66** on one side thereof and a laterally extending flange **68** on the other side thereof. The flanges **66** and **68** are dimensioned to engage grooves **70** and **72** respectively which are provided in the body **12** of the brush as seen in FIG. 4. The grooves **70** and **72** may be cut directly into the brush body **12** or may be part of a preformed slide assembly **74** which can be secured in a suitable cut made in the brush body **12**. A plate spring **76** is secured to the slide assembly **74** to bear against the undersurface of the collar member **62** to keep it firmly in position.

The operation of the device is as follows:

A suitable container is placed upon the collar member and secured thereto as by cementing. The collar member is inserted in the slide portion of the brush body by engaging the laterally extending flanges on the collar in the

cooperating grooves in the brush body. The end of the dispensing tube is inserted into the dispensing valve element. The unit is then completely assembled ready for operation. To operate the dispensing brush it is only necessary to depress the dispensing valve element to discharge a portion of the contents of the container onto the area which it is desired to scrub.

It is our intention to claim all changes and modifications of the examples of the invention herein chosen for purposes of disclosure which do not constitute departures from the spirit and scope of the invention.

We claim:

1. A dispensing brush comprising a longitudinal body portion having a substantially flat upper surface and a plurality of bristles extending downwardly therefrom, a combined container and handle member of cylindrical configuration for containing substances to be dispensed and capable of being firmly grasped within a user's hand, means within said body portion including a dispensing tube for conveying said substances to the under surface of said body portion and means for connecting and disconnecting said dispensing tube and said combined container and handle member, interlocking fasteners on the outer curved surface of said combined container and handle member and said flat upper surface respectively for removably securing said member tangentially to said flat upper surface, said interlocking fasteners extending transversely substantially only in the region of tangency between said flat upper surface and said member to permit a firm grasp on said removably attached container and handle member while controlling the dispensation of the substance contained therein and simultaneously performing a brushing operation.

2. A dispensing brush comprising the combination of: a body portion having a substantially flat upper surface

and a plurality of bristles extending downwardly therefrom; a container serving as a handle member for said brush; interlocking means for removably securing said container to said body portion, said interlocking means comprising a collar member having a generally concave surface for engaging a generally convex portion of said container, laterally extending flanges protruding outwardly from each side of said collar, parallel spaced flange receiving grooves extending along the upper surface of said body portion to terminate in transversely aligned flange stops, said grooves designed to interlock with the flanges on said collar with one end of each said flange abutting one of said flange stops, spring means on said body member between said flange grooves for urging said collar away from said body member in order to firmly seat said flanges within said grooves, means for adhesively securing said collar to said container; means for conveying the contents of said container to the undersurface of said body portion, said means comprising a tube extending from the vicinity of said bristles to said container, and means for connecting and disconnecting said tube to said container.

References Cited in the file of this patent

UNITED STATES PATENTS

1,044,355	Cygon	Nov. 12, 1912
2,204,200	Wisner	June 11, 1940
2,822,615	Durst et al.	Feb. 11, 1958
2,849,737	Piccinini et al.	Sept. 2, 1958
2,972,768	Petion	Feb. 28, 1961
3,008,164	Herman et al.	Nov. 14, 1961

FOREIGN PATENTS

775,900	Great Britain	May 29, 1957
827,725	France	Jan. 28, 1938