Dec. 2, 1930. A. F. STEPELTON 1,783,754

SOAP DISPENSING SHAVING BRUSH

Filed June 12, 1929

Fig. 1.

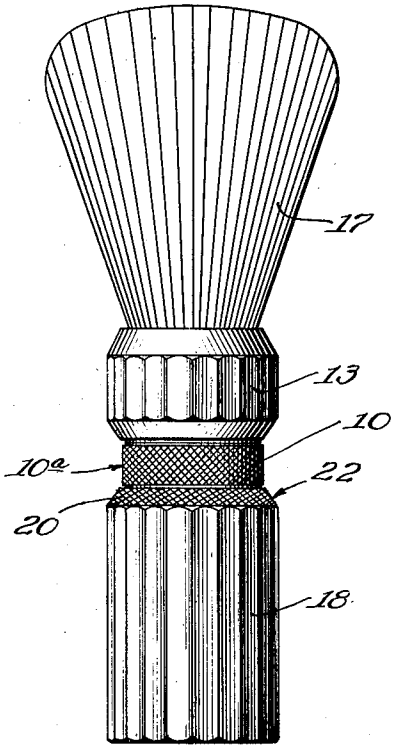


Fig. 2.

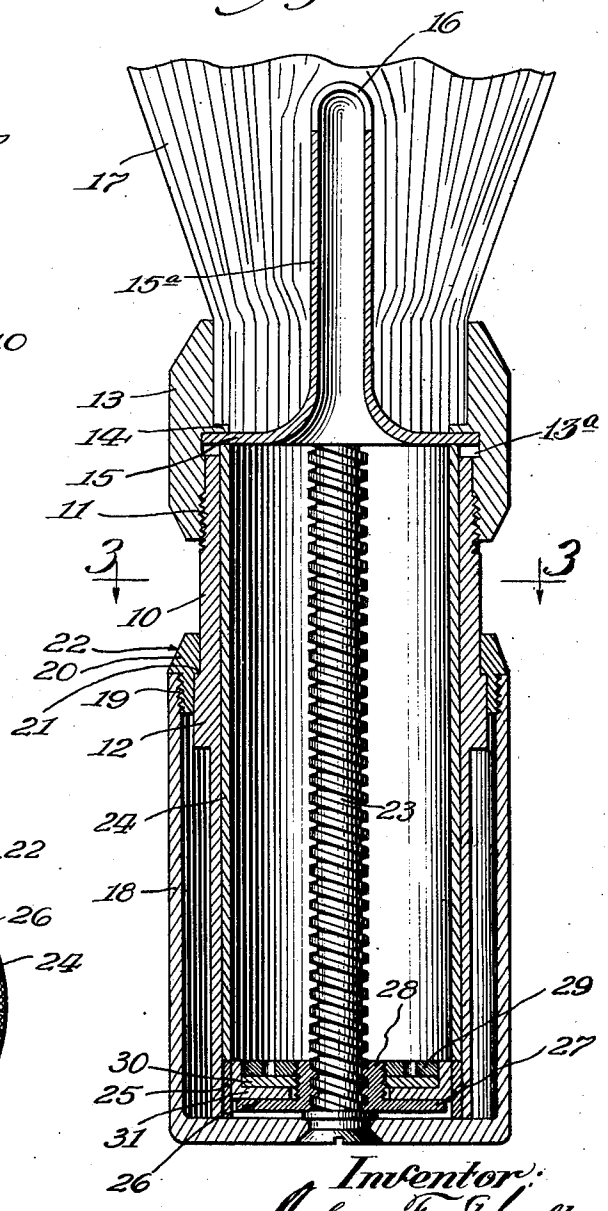
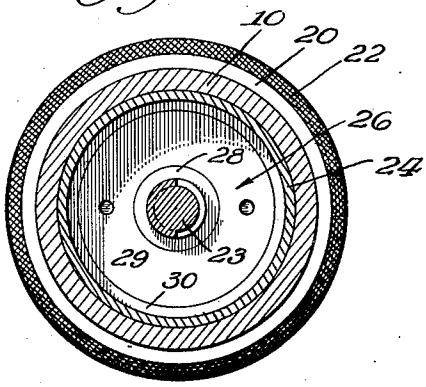


Fig. 3.



Inventor:
Aubry F. Stepelton,
By Wenner & Wenner
Attorneys.

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UNITED STATES PATENT OFFICE

AUBRY F. STEPELTON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO WALTER R. KIRK, OF CHICAGO, ILLINOIS

SOAP-DISPENSING SHAVING BRUSH

Application filed June 12, 1929. Serial No. 370,198.

This invention relates to soap-dispensing shaving brushes and the like.

An object of the invention is to provide a shaving brush of the soap-dispensing type wherein a previously prepared soap cartridge may be inserted, the soap to be fed to the bristles of the brush as it is needed.

A further object of the invention is to provide a brush of this type of a simple yet strong construction, in which the soap cartridge or carton may be readily inserted, and from which a carton, when empty, may be easily and quickly removed.

In accordance with the present invention the handle of the brush comprises a barrel adapted to receive soap cream, which is forced therefrom by means of a piston. The upper end of the barrel is closed by an annular member carrying bristles and a flexible gasket is tightly engaged between said member and barrel, said gasket being provided with a nipple discharging into the bristles. If desired, a soap cartridge may be introduced into the barrel, in which case the gasket is preferably engaged between said annular member and the sleeve of the cartridge and the barrel is preferably provided, at its lower end, with a part or member adapted to form a continuation of the sleeve of said cartridge to form a uniform bore for said piston.

The invention will be fully understood from the following description of a preferred embodiment thereof, taken in conjunction with the accompanying drawings, in which—

Figure 1 is a side elevation of a shaving brush embodying my invention;

Fig. 2 is a longitudinal section through the same on a larger scale; and

Fig. 3 is a section on the line 3—3 of Fig. 2.

Referring to the drawings the embodiment of the invention illustrated comprises a longitudinal barrel or sleeve 10 which is provided exteriorly with a threaded portion 11 near its upper end and with a projecting ridge 12 intermediate of its length.

The threaded portion 11 is engaged by a corresponding threaded portion on an annular member 13 which is provided interiorly with a projecting rib 14 which engages the flat portion of a flexible gasket member 15 preferably of rubber, which is provided centrally with a nipple portion 15^a which extends upwardly into the bristles 17, and terminates in a closed end in which one or more slots 16 are cut for the purpose of permitting soap cream, or paste to pass therethrough.

The bristles 17, are rigidly mounted in the annular member 13 and a central opening is provided therethrough to receive the nipple 15^a. If desired the bristles, 17, the annular member 13 and the rubber member 15, 15^a may be formed as an integral unit. It is preferred to make the member 15, 15^a as an independent unit, the gasket portion 15 thereof being received in a groove 13^a in the annular member 13, so that it will not readily fall out of same, when the said annular member is removed from the brush. The lower end of the barrel 10 is closed by a cup member 18, the skirt of which extends upwardly approximately to the upper side of the ridge 12 of the barrel 10. The cup member 18 is threaded interiorly at its upper edge as shown at 19, which threaded portion is engaged by a corresponding threaded portion of a ring 20 provided with a shoulder 21 which engages the upper side of the ridge 12, and with a knurled exterior surface 22. Between the annular member 13 and the ring 20, the exposed surface of the barrel 10 is knurled as shown at 10^a in Fig. 1.

On the lower end or bottom of the cup member 18 is rigidly mounted a threaded stem 23 so that it rotates with said cup. The shell or carton of the soap cartridge is designated by the numeral 24. This shell, like the barrel 10 is preferably of circular cross sec-

tion, fits snugly into said barrel and, when fully inserted, preferably extends upwardly slightly above the upper edge of the barrel 10. At the lower end of the interior of the barrel a ring 25 is provided, which is either integral therewith or rigidly inserted therein with a drive fit or other means of attachment. Said ring forms an abutment for the cartridge shell 24 and constitutes a continuation of same for more effective cooperation with the piston which is designated generally by the numeral 26.

The piston 26 comprises a plate member 27 provided with an upstanding boss 28 which is threaded interiorly to co-operate with the stem 23 with a nut plate 29. Between the plates 26 and 29 are engaged a metal washer 30 and a flexible washer, 31 preferably of leather, which is turned upwardly so as to form a circumferential seal.

As indicated, the member 15, 15[a] is preferably formed of rubber, and the washer 31 of leather. The remainder of the brush, with the exception of the bristles, may suitably be made of metal, preferably of a light metal, such as aluminum. The soap cartridge shell 24 is preferably also of aluminum although it may be made of other metal or other materials, such as paper, cardboard, or the like.

The operation of the brush will now be described. Assuming that the soap-chamber has been exhausted, the cup member 18 is rotated in a counterclockwise direction with respect to the barrel 10 so as to retract the piston 26 to the position illustrated in Fig. 2. The annular member 13 is now unscrewed from the barrel 10 and removed together with the rubber member 15 and the bristles 17. The empty shell 24 is now removed and a full cartridge of soap cream or paste, including a shell 24, is placed in the barrel 10. If desired the shell 24 may be retained in position and be refilled with soap cream from any desired source.

The annular member 13 is now applied to the barrel 10 and is screwed tightly thereon until the gasket 15 is firmly compressed between the rib 14, and the upper edge of the sleeve 24. The brush is now ready for use. It will be readily understood that by clockwise rotation of the cup 18 with respect to the body 10 or annular member 13, the threaded stem is rotated within the piston 26, and the latter is caused thereby to move longitudinally of the chamber 10, causing a regulable amount of soap to be expressed into the bristles of the brush through the slot 16. The friction between the piston and the soap and the shell 24 prevents rotation of said piston with the stem 23, and no structural means are necessary to prevent such rotation.

While I have described and shown only a single embodiment of the invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made which do not depart from the spirit and scope of the invention, as disclosed in the appended claims.

I claim:

1. In a soap-dispensing brush, in combination, a hollow barrel of circular cross section, a unitary head comprising an annular member and bristles, removably threaded on one end of said barrel, a flexible gasket adapted to be firmly engaged between said barrel and annular member, a flexible nipple integral therewith adapted to discharge into said bristle, a soap cartridge shell in said barrel, a cup-shaped handle member extending substantially the full extent of said barrel and abutting the other end of said barrel and freely rotatable therearound, abutments on the side of said barrel between its ends preventing longitudinal movement of said cup member, a threaded stem rigidly carried by said cup member and extending into said barrel, and a perforated piston interiorly threaded and mounted on said threaded stem, said piston being adapted to engage the inner walls of said shell.

2. In a soap-dispensing brush, in combination, a hollow barrel, a unitary head comprising an annular member and bristles, removably threaded on the upper end of said barrel, a rubber gasket carried by the head and adapted to be firmly engaged between said barrel and annular member, a nipple integral with said gasket adapted to discharge into said bristles, a rotatable closing member abutting the lower end of said barrel and adapted to rotate freely thereon, a threaded stem rigidly mounted on said rotatable closing member and extending into said barrel, a perforated piston within said barrel interiorly threaded to engage said stem, said piston being adapted frictionally to engage the inner walls of a shell of a soap cartridge inserted in said barrel, and a ring of less diameter than said barrel formed in the lower end of said barrel to provide an abutment for said shell and to receive and hold the piston against turning with the stem in its lowermost position.

3. In a soap-dispensing brush, in combination, a hollow barrel, an annular member removably mounted thereon carrying bristles, a nipple extending from said barrel into said bristles, a cup member freely rotatable on the barrel enclosing the other end thereof, an annular member threaded on the lip of said cup member and adapted to engage a ridge on the exterior of said barrel to prevent relative longitudinal movement between the cup member and the barrel, a threaded stem rigidly carried by said cup member and extending into said barrel, and a perforated piston within said barrel interiorly threaded to engage said stem, said piston being adapted frictionally to engage the inner walls of a

shell of a soap cartridge inserted in said barrel.

4. In a soap dispensing brush, in combination, a hollow barrel, an annular member removably threaded on one end thereof carrying bristles, a flexible nipple extending from said barrel into said bristles, a rotatable cup member closing the other end of the barrel, an annular member threaded into the lip of said cup member and provided with an abutment adapted to engage an abutment on the exterior of the barrel to prevent relative longitudinal movement between said barrel and cup member, a threaded stem rigidly mounted on said cup member and extending into the barrel, a piston threaded on said stem adapted to engage the inner wall of a shell of a soap cartridge and an annular member rigidly mounted in said barrel at its closed end and adapted to serve as an abutment for said shell and to receive the piston in its retracted position below the shell.

5. In a soap dispensing brush, in combination, a hollow barrel, means for compressing soap cream therein, an annular closure member carrying bristles adapted to be attached to said barrel and having a gasket retaining groove, a flexible gasket carried by said member and extending into said groove, and a tubular extension of said gasket adapted to deliver soap cream into said bristles.

6. In a soap-dispensing brush, in combination, a hollow barrel, a soap cartridge sleeve therein extending slightly above the upper edge of said barrel, means for compressing soap cream within said sleeve, an annular member carrying bristles adapted to be attached to said barrel, a flexible gasket carried by said annular member adapted to be compressed between said member and said sleeve, said annular member being provided with an annular groove surrounding the upper end of said sleeve in which said gasket is carried, and a tubular extension of said gasket adapted to deliver soap cream into said bristles.

7. In a soap-dispensing brush, in combination, a hollow barrel open at both ends, a brush head including an annular member removably fitted to one barrel end having an annular gasket receiving seat, a gasket disposed within the seat adapted under compression to expand radially therewithin, a shell extended within the barrel with one end in frictional engagement with the gasket, means connected to the barrel near its opposite end forming an abutment for the proximate end of the shell, the brush head member being adjustable longitudinally of the barrel through a screw-threaded connection therewith whereby to compress the gasket carried thereby against the shell end with a consequent radial expansion, a piston fitted to travel longitudinally and non-rotatably within the shell, screw means in connection with the piston having operating means therefor exteriorly of the shell, and means forming a passageway for material to pass through the brush head from the proximate end of the shell in response to forward movement of the piston.

In testimony whereof, I have hereunto set my hand and affixed my seal this 6th day of June, 1929.

AUBRY F. STEPELTON. [L. S.]