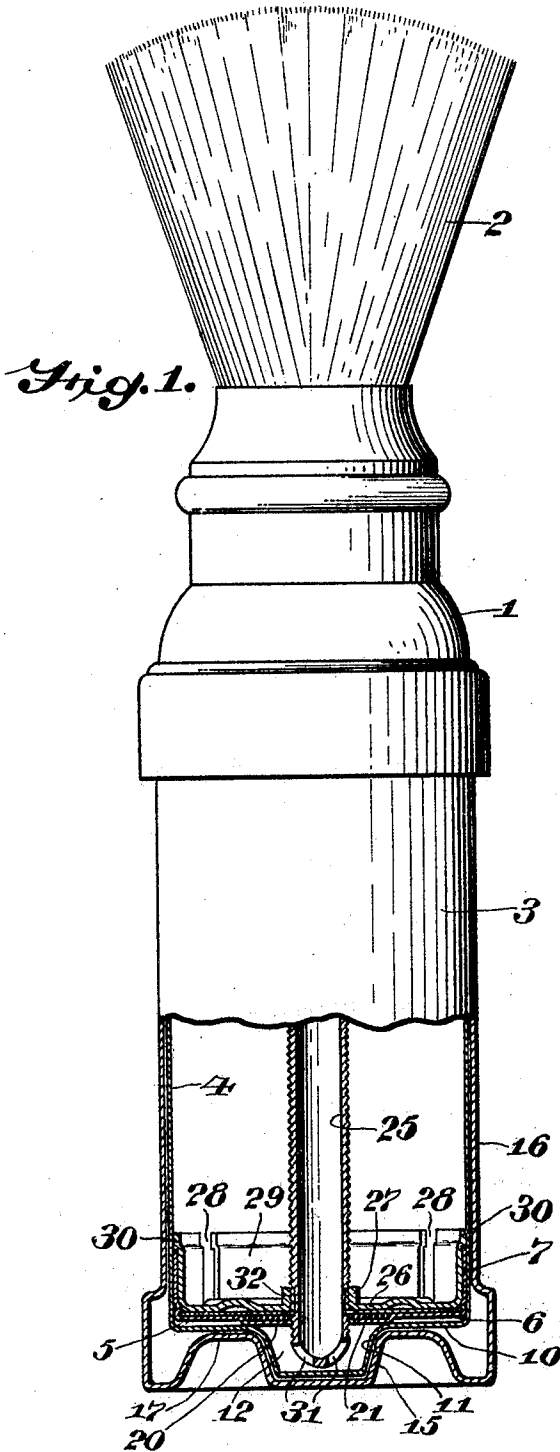
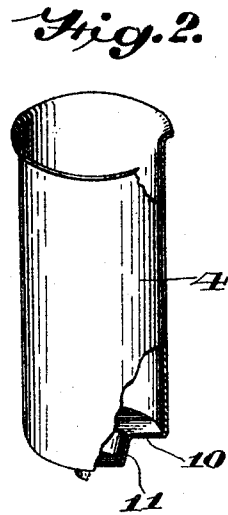
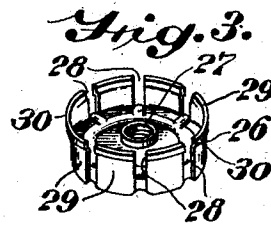


I. C. SHALKOP.  
DISPENSING DEVICE.  
APPLICATION FILED NOV. 3, 1920.

1,395,302.

Patented Nov. 1, 1921.



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## DISPENSING DEVICE.

1,395,302.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, ISAAC C. SHALKOP, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented an Improvement in Dispensing Devices, of which the following is a specification.

My invention relates to improvements in dispensing devices of the character comprising an outside or handle portion and an inside container for the liquid or semi-liquid material to be dispensed thereby, and more particularly to dispensing devices employed in connection with and forming a part of the structure of fountain shaving brushes in which the shaving cream or soap, of semi-liquid or plastic state, for the brush is adapted to be contained in and supplied from a container, known in the trade as a "re-fill", adapted to be placed inside of the hollow handle of the brush, and it has for its object, broadly, to provide a construction in which the said container and the handle are so related to each other and to the discharge tube which projects into the container, and cooperate with each other in such manner that only a container of substantially the construction shown may be employed in the use of the brush.

A further object is to provide a construction of the character stated in which, when the piston or plunger has reached the limit of its movement toward the bottom of the said container or "re-fill" a minimum of soap remains in the bottom of the said container which must be wasted.

In the use of these brushes it will be understood that when the soap in a container is exhausted it is removed and a new container or "re-fill" substituted therefor. One of the difficulties heretofore encountered by manufacturers has been in the securing of a cream soap which was satisfactory for use in brushes of this character. Having found a satisfactory soap it is important to the manufacturer that only such soap shall be used in brushes manufactured by him. It is important, therefore, that a construction be provided in which only a container of a construction which the manufacturer of the brush may supply is adapted to be used. It is only in this way that the manufacturer can be assured that a soap of the requisite quality and characteristics shall be sup-

plied for use in the brushes manufactured and put upon the market by him.

Other objects and advantages of my invention will be referred to in the detailed description thereof which follows or will be apparent from such description.

In order that the invention may be readily understood and its practical advantages fully appreciated, reference may be had to the accompanying drawing in which I have illustrated one form of a convenient embodiment thereof. However, it will be understood that changes in the details of construction may be made within the scope of the appended claims without departing from the said invention.

In the drawing:

Figure 1 is a view partly in elevation and partly in central, longitudinal section;

Fig. 2 is a view in perspective of the container which is adapted to hold the soap and from which the soap is supplied to the bristles or hairs of the brush; and

Fig. 3 is a perspective view of the follower plunger forming a part of the soap discharge piston device of the structure.

It will be observed that I have illustrated my invention as embodied in a fountain shaving brush construction but obviously it may be embodied in other constructions wherein liquid or semi-liquid material is to be dispensed.

Referring to the drawing: 1 designates what may be referred to as the brush head portion of the structure, to which the hairs or bristles 2 are secured, and 3 the handle which is adapted to be engaged with and disengaged from the head portion 1 in any known manner.

The handle 3 is rotatable with respect to the brush head portion 1 and may be connected with the latter in the manner shown and described in the pending application of William Wilson Heinitsh, Isaac C. Shalkop and Alexander B. Lauterbach for Letters Patent of the United States, filed April 27, 1920, Serial Number 376,929.

The soap container 4 is of tubular form as shown and consists of thin sheet material, preferably zinc because of its cheapness and lightness. One end of the container 4 is open as indicated in Fig. 2 and when filled with soap and placed upon the market ready for sale is adapted to be closed by the portion of the piston structure comprising the

cup-shaped part 5 and the disk 6 in the bottom thereof. After the soap has been placed in a container 4 the part 5 with the disk 6 therein is placed in the open end thereof with the edge of the flange 7 upon the part 5 situated adjacent the outer edge of the open end of the said part 4. The opposite end of the part 4 is closed by means of an integral closure or end portion 10 having its central portion pressed outwardly, as indicated at 11, to form a relatively small chamber 12, as shown in Figs. 1 and 2. The outwardly extending hollow projection 11 projects into a similar projection 15 in the outer end of the handle 16, formed by an annular depression 17 therein. As appears in Fig. 1, when the soap container 4 is placed within a hollow handle 16 the projection 11 fits snugly within the projection 15 in the handle 16.

The member 5 of the piston structure is depressed as indicated at 20 in Fig. 1, said depression surrounding a central opening through the part 5 which opening registers with a similar opening in the disk 6. A rubber sheet 21 is seated in the said depression, said sheet having a central opening therein which is of less diameter than the openings through the parts 5 and 6.

In order to cause movement of the piston structure within the soap container 4 to effect discharge of the liquid or plastic soap through the discharge tube 25, I have provided a follower plunger 26 having a screw threaded central flange portion 27 which engages the external screw threads upon the tube 25. The follower plunger 26 may be described generally as being of cup shape. The sides of the said plunger are provided with slots, as indicated at 28, the presence of which divides the sides into sections or parts 29 which are more or less resilient. At their upper ends these parts are pressed outwardly to form projections or bead-like portions 30 which contact with the inner surface of the soap container 4. The upper edge of the flange 7 is seated against the lower edges of the bead-like portions 30.

The soap enters the tube 25 from the container through openings 31 at its outer or bottom end which projects into the space within the projection 11, as is clearly shown in Fig. 1.

When it is desired to place a new soap container in position for use, the exhausted or emptied container is removed and the follower plunger 26 returned to position adjacent the upper or inner end of the discharge tube 25 adjacent the brush head 1. The discharge tube is then inserted through the openings in the parts 5, 6 and 21 of the piston structure and through the soap therein to a position with its outer end projecting into the space 12 formed by the hollow projection 11. When the discharge tube 25

reaches a position within the container 4 with its outer end projecting into the space 12, as shown in Fig. 1, the follower plunger 26 likewise has entered the cup-shaped member 5 of the piston structure.

In the use of the brush the handle 16 is rotated toward the right with respect to the brush head 1, such rotation causing like rotation of the container 4 and the piston structure, including the part 26, therein. The external screw threads upon the discharge tube 25 are so arranged that such rotation effects outward movement of the piston structure within the container 4 to force the soap through the openings 31 and thence through the discharge tube 25 into the brush 2. Continued rotation of the handle 16, the container 4 and of the piston structure, causes movement of the latter outwardly in the container 4 until it ultimately arrives at the position shown in Fig. 1 of the drawing, in which position the outer surface of the part 5 contacts with the portion of the bottom of the container 4 surrounding the projection 11. It will be apparent that when the piston structure has reached this position the limit of its outward movement has been reached, and that practically the only soap left in the container 4 is that within the chamber 12. It is preferable that when the piston structure arrives at the position shown in Fig. 1 it shall have become disengaged from the external screw threads upon the discharge tube 25. This is accomplished by providing the space 32 at this point upon the discharge tube 25 from which the screw threads are omitted. By thus omitting the screw threads from a section of the discharge tube, jamming of the piston structure against the bottom of the container 4 is avoided.

It will be observed that the discharge tube 25 is of such length that it projects into the space formed by the projection 15 and beyond the plane of the bottom of the annular depression 17. By reason of this relationship between the top or closure of the handle 16 and the discharge tube 25, it will be apparent that a container 4 with a flat bottom or closure could not be employed or used in the said handle for the purpose of supplying soap for the brush. It will be seen, therefore, that I have provided a structure in which only a soap container or "re-fill" of substantially the construction shown may be employed. This being the case, it will be apparent that means is afforded whereby the manufacturer of the brush may be assured that only "re-fills" manufactured and put out by him or under his license and control may be used or employed in connection with brushes manufactured by him. In this way he may be assured that only soap having the desired and requisite qualities necessary to insure complete satisfaction of

the user may be employed in connection with the brushes manufactured by him.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a dispensing device of the character described, the combination of a hollow member having a closed end formed with a central projection surrounded by a depression, a container situated within the said hollow member and having a closed end provided with a projection which extends into the said projection of the said hollow member, and a discharge tube extending into the said projections.

2. In a device of the character described, the combination of an outside hollow member having a closed end with an annular depression therein forming a central projection, a hollow member situated within the said first named hollow member having a closed end provided with a central, outwardly extending projection which extends into the projection of the first named member, and a discharge tube extending from the forward end of the inner member and projecting into the chamber formed by the projection in the outer closed end thereof, the portion of the said closed end surrounding the projection being situated in adjacent relation to the annular depression formed in the first named member.

3. In a device for dispensing liquid or semi-liquid soap to the bristles of a shaving brush, the combination of an outside handle member, an inside container for containing the liquid or semi-liquid soap material, the said outside handle member being provided with a centrally situated projection in its outer closed end and the outer closed end of the inside container being provided with a central projection which fits in the projection in the outer closed end of the outside member, a discharge tube the outer open end of which extends into the projection of the outer end of the said container and beyond the plane of the closure for closing the end of said container, and a piston device adapted to move outwardly upon the said discharge tube for forcing the liquid or semi-liquid soap material from the said container through the said discharge tube.

4. In a dispensing device of the character described, the combination of an outside

tubular member having an outer closed end which is provided with an annular depression forming a central projection, an inside tubular member situated within the said outside tubular member, said inside tubular member being provided with a central projection which extends beyond the plane of the end of the said inside tubular member, said projection extending into the central projection of the outside tubular member, a discharge tube which is relatively stationary with respect to the said outside and inside tubular members, and a piston device having screw threaded connection with the said discharge tube which piston device is adapted to rotate with the outside and inside tubular members whereby rotation of the latter effects movement of the said piston device upon the said discharge tube for causing discharge of the material to be dispensed from the said inside tubular member, substantially as described.

5. In a device of the character described, the combination of an outside tubular member having a closed end, which end is provided with an annular depression forming a central projection in the said closed end, an inside tubular member within the said outside member, the said inside member being adapted to contain a liquid or semi-liquid material which is to be dispensed, and its outer closed end being provided with a central projection which fits in the projection in the outer closed end of the outside tubular member, a discharge tube the outer end of which is open and projects into the projection within the outer end of the said inside member, the outer end of said tube projecting beyond the plane of the bottom of the said annular depression, and a piston having screw threaded engagement with the said discharge tube, the said piston being adapted to be moved outwardly upon the said tube upon relative rotation between the said piston and tube and the said piston becoming disengaged from the screw threads upon the said tube at about the moment it contacts with the portion of the outer end of the said inside member which portion surrounds the central projection thereof.

In testimony that I claim the foregoing as my invention, I have hereunto set my name this 15th day of October, A. D. 1920.

ISAAC C. SHALKOP.