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J. CAMPANELLA

SANITARY LATHER MAKING DEVICE

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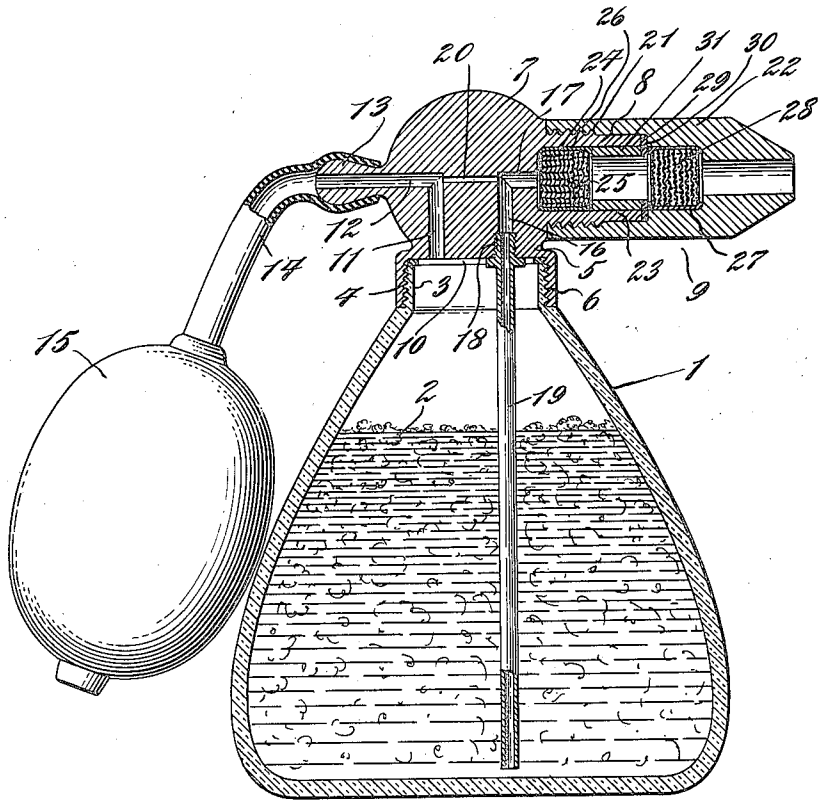

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UNITED STATES PATENT OFFICE.

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SANITARY LATHER-MAKING DEVICE.

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To all whom it may concern:

Be it known that I, JOSEPH CAMPANELLA, a citizen of the United States, residing at New York city, in the county of Bronx and State of New York, have invented certain new and useful Improvements in a Sanitary Lather-Making Device, of which the following is a specification.

It is common practice in barber shops to use a single brush for forming the lather on the faces of different customers. Such a practice is obviously unsanitary and highly objectionable, and in many places laws have been passed requiring that the shaving brush and other utensils be sterilized after each operation.

In accordance with my invention, a nozzle is provided through which liquid soap, or other lather-forming liquid, is passed and from which it issues as lather which may be applied to the face of the customer by the hand of the barber, thereby overcoming the objections above referred to.

I have illustrated my novel form of nozzle in connection with a device for containing liquid soap and for forcing the same through the nozzle, which is similar to that illustrated in my prior application, Serial No. 373,586, although it will be understood that the nozzle forming the subject-matter of the present invention is not limited to use with the particular apparatus there illustrated.

My invention will best be understood by reference to the accompanying drawing, the single figure of which is a vertical section, partially in elevation, through a device embodying one form of my invention.

Referring, now, to the drawing, in which I have illustrated the preferred form of my invention, 1 is a receptacle, preferably, though not necessarily, formed of glass or other transparent material, for containing liquid soap or other lather-forming liquid 2. The upper end of the receptacle is constricted, at 3, to form a neck, which is screw-threaded on its outer side, as at 4, to receive a cap 5, which is screw-threaded on its inner side, as at 6, to engage the screw-threads of the neck 3, the cap preferably being formed integral with a head 7, which is preferably formed of a suitable metal, such, for example, as aluminum. The head is provided with an extension 8, preferably cylindrical in form, and forming part of the nozzle, which I have indicated generally by the reference character 9. A washer 10, of rubber or other flexible material, is preferably interposed between the top of the neck 3 and the head 7. The head is provided with a passage 11 having a vertical portion communicating with the receptacle and a horizontal portion 12 which passes through a nipple 13 formed on the head 7. A rubber pipe 14 is attached to the nipple 13 in the manner usual in atomizers, a compression bulb 15 being attached to the outer end of the pipe 14. The head 7 is also provided with a passage 16, having a vertical portion communicating with the receptacle 1, and a horizontal portion 17, the horizontal portions of the two passages 11 and 16 preferably being arranged in alignment, as shown. The vertical portion of the passage 16 is screw-threaded at its lower end, as at 18, to receive the screw-threaded end of a pipe 19, which preferably extends to a point near the bottom of the receptacle 1. A by-pass or passage 20 connects the horizontal portions 12 and 17 of the two described passages, and is preferably of a small diameter as compared with said passages. The extension 8 on the head is screw-threaded at 21 and receives the screw-threaded end of a tip 22. The extension 8 is provided with a recess 23, preferably cylindrical in form, adapted to receive a lather-forming device 24, which comprises a plurality of lather-forming foraminous members 25 located side by side, and preferably secured in a cylindrical shell 26, which is received in the recess 23, each of the screens being of a mesh sufficiently large to prevent the liquid soap from clogging the same. The ends of the shell 26 are preferably spun over the screens to hold the same in position, the shell and the screens forming a unitary structure. The tip 22 is provided with a recess 27, preferably of the same diameter as the recess 23 in the extension 8, and registering therewith when the tip is secured to said extension, as illustrated in the drawing. A second lather-forming device 28 similar to the one already described is received in the recess 27. A washer 29 is preferably interposed between a shoulder 30 formed in the tip and the outer end of the extension 8, and which also engages the lather-forming member 28 on its inner side.

The two lather-forming members are preferably spaced apart by a collar 31 which is received in the recess of the extension 8.

The operation of the device embodying my invention will readily be understood from the foregoing description, and is as follows: By pressing the bulb 15, pressure is created within the receptacle 1, which forces liquid soap through the pipe 19 and through the passages 16 and 17 to the nozzle, the small diameter of the passage 20 permitting sufficient pressure to be built up within the receptacle to force the liquid soap through the pipe and the passage. At the same time, the air passing through the passage acts upon the liquid rising through the passage 20 to break the same up into fine particles and assists in the preparation of the soap for lather-forming. The liquid soap in this form continues through the passage 17 and through the lather-forming foraminous members, which complete the formation of the lather, which issues from the tip 22, from which it may conveniently be removed by the hand and applied to the face of the customer.

Liquid soap of the character which I find it desirable to use is not clear, but contains a certain amount of rather fine sediment. I have found, in practice, that a single foraminous member of sufficiently fine mesh to form lather, quickly becomes clogged, and the screen must then be renewed. By providing a plurality of lather-forming members located side by side, i. e., face to face, each of the members being of a mesh sufficiently coarse to permit the soap, including the sediment, to pass, and thereby preclude its becoming clogged by the liquid soap, the lather-forming member may be used practically indefinitely without becoming clogged, and, at the same time, the plurality of lather-forming members forms a satisfactory lather. I have found, further, that by providing two separate sets of such members, spaced apart in the manner shown, the quality of the lather is greatly improved, as it forms a much more creamy lather than is formed by a single lather-forming member having the same number of foraminous members as the two members illustrated combined.

My theory of what takes place in the lather-forming members is as follows: When the lather-forming liquid, such as liquid soap, mixed with the incoming air, passes through the first foraminous member, the soap forms films across the various openings, the edges of each individual film adhering somewhat to the wires of the foraminous member. The air pressure forces the middle of the film away from the member, thereby forming individual bubbles, and as the mixture of air and liquid passes through the successive foraminous members, the bubbles are finely broken up, and finally issue from the nozzle in the form of a creamy lather. Whatever the correct theory may be, however, as to how the lather is formed, I have found, in practice, that the device made in accordance with my invention, makes a lather that is highly satisfactory.

What I claim and desire to secure by Letters Patent of the United States is:

1. In a lather-making device, a nozzle, and means for forcing a lather-forming liquid through said nozzle, said nozzle comprising a plurality of lather-forming foraminous members arranged face to face and in contacting relation through which the lather-forming liquid is forced in series.

2. In a lather-making device, a nozzle comprising a plurality of metallic lather-forming foraminous members arranged face to face and in contacting relation through which a lather-forming liquid is forced in series, each screen being of sufficiently coarse mesh to prevent clogging by said liquid.

3. In a lather-making device, a nozzle, and means for forcing a lather-forming liquid through said nozzle, said nozzle comprising two spaced lather-forming devices each of which comprises a plurality of lather-forming foraminous members arranged face to face through which the liquid soap is forced in series.

4. In a lather-making device, a lather-forming liquid receptacle, and a nozzle for converting said liquid into lather, comprising a head adapted to be secured to said receptacle provided with a passage and formed with a recess, a plurality of lather-forming foraminous members arranged face to face and adapted to be received in said recess, a tip adapted to be secured to said head and formed with a passage registering with the passage of said head and formed with a recess, a plurality of lather-forming members adapted to be received in the recess of said tip, the two sets of lather-forming members being spaced apart when the parts are in assembled position.

5. In a lather-making device, a nozzle, means for forcing a lather-forming liquid through said nozzle, and means for subjecting the lather-forming liquid to a jet of fluid under pressure just prior to its passage through said nozzle, said nozzle comprising two spaced lather-forming devices each of which comprises a plurality of lather-forming foraminous members arranged face to face through which the liquid soap is forced in series.

6. In a lather-making device, a receptacle for the lather-forming liquid, a head adapted to be secured to said receptacle and provided with two passages communicating with said receptacle and provided with portions in substantial alinement, a by-pass connecting the alined portions of said passages,

means for creating pressure within said receptacle, and a nozzle comprising a plurality of lather-forming foraminous members arranged face to face through which the lather-forming liquid is forced in series.

7. In a lather-making device, a receptacle for the lather-forming liquid, a head adapted to be secured to said receptacle and provided with two passages communicating with said receptacle and provided with portions in substantial alinement, a by-pass of smaller diameter than either of said passages connecting the alined portions of said passages, means for creating pressure within said receptacle, and a nozzle comprising a plurality of lather-forming foraminous members arranged face to face through which the lather-forming liquid is forced in series.

JOSEPH CAMPANELLA.