Jan. 25, 1966 J. O. CONVERSE 3,231,145

LIQUID SOAP DISPENSER

Filed Nov. 21, 1963

FIG. 1

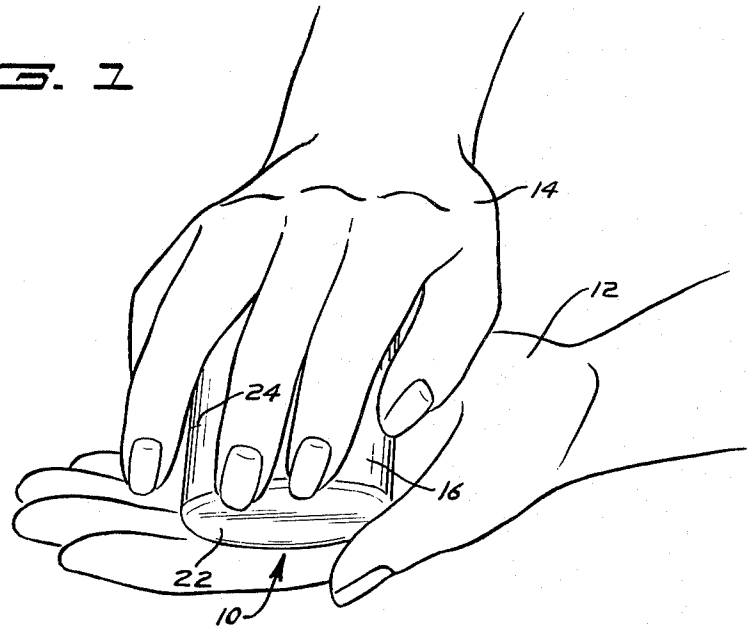


FIG. 2

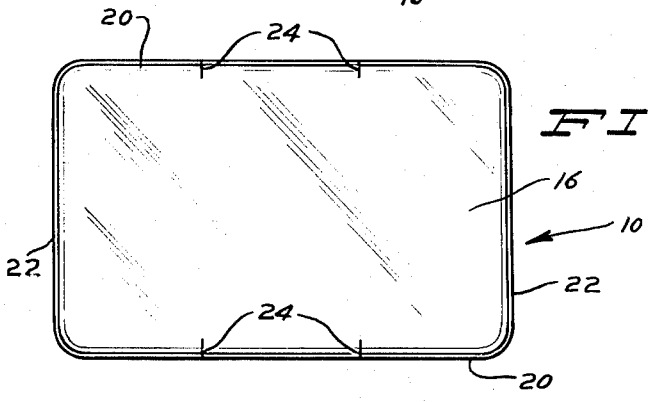


FIG. 3

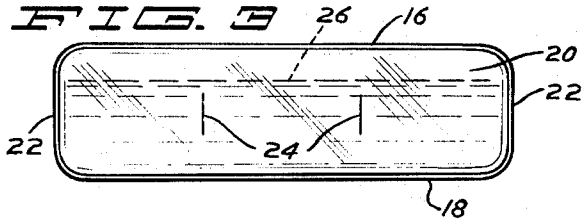


FIG. 4

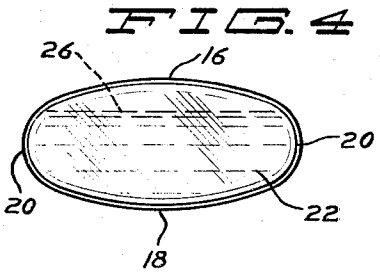
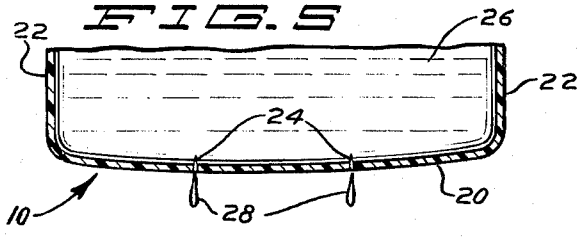


FIG. 5



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LIQUID SOAP DISPENSER

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This invention relates generally to liquid soap dispensing devices, and pertains more particularly to a plastic container having slits therein through which the soap is gravitationally discharged when the walls of the container are deformed slightly by the user's hands.

One object of the invention is to provide a liquid soap dispenser intended to replace hand soap. One of the disadvantages attending the use of hand soap is that there is usually a messy condition on the hand soap and on the soap holder resulting for a period of time after each use, the period depending upon how long it takes for the soap to completely dry and even then there is a visible soap film usually remaining. An aim of the present invention, however, provides a plurality of slits which automatically close after each dispensing operation so that there is no leakage.

Another object of the invention is to provide a dispenser for liquid soap which will not diminish in size as is the situation with respect to ordinary bar or cake soap.

Another object of the invention is to provide a dispenser for liquid soap that will be used exactly like a bar or cake of soap. In this regard, it is planned that only a gentle deformation of the walls of the container by the hands of the user when washing will be necessary in order to effect a desired and controlled amount of soap discharge into the hands.

Still another object of the invention is to provide a dispenser for liquid soap which will not require any packaging, for the dispensing slits can readily be held closed by sections of pressure sensitive tape applied thereover at the factory. These sections of tape can be easily removed by the consumer, yet will assure an effective seal prior to actual use. Consequently, it is not requierd that the dispenser be marketed in any package other than the container itself.

Yet another object of the invention is to provide a liquid soap dispenser that can be held in any position and still have the liquid soap dispensed properly. Stated somewhat differently, it is an aim of the invention to so locate the slits that the user will not have to consider the orientation of the dispenser when he picks it up, any position affording adequate gravitational flow of the liquid soap when the walls of the container are deformed slightly.

The invention has for a still further object the provision of a soap dispenser that will be so inexpensive to manufacture that the over-all cost of the dispenser and liquid soap, the liquid soap being cheaper than the bar or cake type, will not be priced at the retail level at any higher figure than the ordinary soaps now purchased.

A still further object of the invention is to provide a liquid soap dispenser that can be attractively decorated, such as by making the plastic material multicolored.

Also, it is within the purview of the invention to permit the adding of advertising matter that will remain for the life of the dispenser. For instance, the manufacturer can place his trademark on the container and the user will be constantly reminded of the manufacturer, thereby encouraging the user to purchase that particular type of soap again.

A still further object of the invention is to provide a liquid soap dispenser that will float in water, yet not dissolve and therefore decrease in size. In other words,

there will be no depletion of soap when taking a bath, this being particularly desirable when children are involved.

These and other objects and advantages of this invention will more fully appear from the following description, made in connection with the accompanying drawing, wherein like reference characters refer to the same or similar parts throughout the several views and in which:

FIGURE 1 is a perspective view showing my liquid soap dispenser in actual use;

FIGURE 2 is what can be considered a top plan view of the device shown in FIGURE 1, although it will be understood that the dispenser can be held in various positions;

FIGURE 3 is a side elevational view corresponding to FIGURE 2;

FIGURE 4 is an end view corresponding to FIGURE 3, and

FIGURE 5 is a sectional view showing the dispenser held in a vertical position so that one side is lowermost, the slits in said side being flexed into an open position for the gravitational discharging of liquid soap therethrough.

Referring now in detail to the drawing, my liquid soap dispenser has been designated generally by the reference numeral **10**. Since the dispenser **10** will normally be held in the user's hands, a person's left hand has been indicated by the reference numeral **12** and the person's right hand by the reference numeral **14** in FIGURE 1. As the description progresses, it will become obvious that the dispenser **10** can be held in various positions and that the specific orientation is unimportant as far as effecting a gravitational discharge of the dispenser's contents.

Describing the dispenser **10** in more detail, it will be perceived that the dispenser constitutes a resilient and deformable container having top and bottom walls **16** and **18** (see FIGURE 4 for the bottom wall **18**), opposite side walls **20** and opposite end walls **22**. It is contemplated that the container constituting the dispenser will be generally of the same size as a cake of soap. Further, in its preferred form, the dispenser would be fabricated from polyethylene having a wall thickness of about 1/32 inch. It will be appreciated, though, that the dispenser can be made so inexpensively that it is not intended for reuse. In this way, the dispenser can have a configuration closely resembling a cake or bar of soap and it will be observed that a totally enclosed container is provided.

Of the utmost importance in practicing the invention are a plurality of slits **24**. As best seen in FIGURE 4, the side walls **20** curve outwardly and the slits **24** are located in these side walls, there being a pair of such slits in each side wall. To some extent, the slit length will depend upon the wall thickness of the dispenser **10** and other dimensional characteristics. It will be appreciated that the slits **24** are preferably located in the side walls **20**, because the user will logically apply pressure to the walls **16** and **18** when using the dispenser, it being planned that the dispenser be used in the same manner as a cake of soap. Thus, the user's hands will not cover or obstruct any of the slits **24**. Also, with the slits **24** so located, the level of the liquid soap hereinafter specifically mentioned will be such that it will be above at least a portion of any slit no matter in what position the dispenser is held. Even with only a very small portion of the original amount of liquid soap remaining in the dispenser, the dispensing action is facilitated by the soap bubbles formed as a result of the unintentional shaking of the dispenser during use. It is important, though, that the slits **24** be normally closed and flexed into open position by gentle pressure being applied to the top and bottom walls **16**, **18**. Actually, it is preferable that the top and bottom walls **16**, **18** also be outwardly curved as can be best viewed in FIGURE 4. In this way, only a slight amount of deformation

pressure need be applied to the walls **16**, **18** in order to deform the dispenser **10** sufficiently to open the slits **24**.

The liquid soap contained in the dispenser **10** has been indicated by the reference numeral **25**. There is no special requirement as to the type of soap, it being intended that ordinary liquid soap be utilized, whether it is of the detergent variety or not.

It is envisaged that the dispenser **10** be employed in the same manner that cake or bar soap is utilized. With this thought in mind, FIGURE 1 has been presented. The left hand **12** is shown in a substantially horizontal plane and therefore the dispenser **10** has been shown in a nearly horizontal position. With the user's right hand **14** above the left hand **12**, a slight downward pressure on the upper or top wall **16** will cause the slits **24** to be flexed open sufficiently to permit the discharge of the liquid soap **26** from the interior of the dispenser.

As the user rubs the dispenser **10** back and forth in the hands or on the body, a continuous lather is produced, the quantity of which can be varied by the degree of pressure applied by the user. Such a lather simulates that produced by cake or bar soap when scrubbing. In other words, any manipulation of the dispenser **10** by the user produces the same results which would be realized with bar type soap.

It should be made clear, though, that the orientation of the dispenser **10** is relatively unimportant. For instance, in FIGURE 5, the dispenser **10** is shown in a substantially vertical position, such a relationship resulting in one of the side walls **20** being lowermost. This position facilitates the showing of the liquid **26** being discharged, a pair of droplets **28** being depicted, although for all intents and purposes a virtually steady but small stream of liquid soap **26** flows when the dispenser **10** is gently deformed. As soon as the user stops applying pressure, the slits **24** that have been forced open quickly return to their closed position and thereafter prevent the inadvertent or undesired escape of liquid soap **26** therethrough. In other words, it is only when the dispenser **10** is deformed that the slits **24** will allow the liquid soap **26** to pass therethrough; at all other times the flow of liquid is completely blocked.

Hence, from the foregoing information it will be appreciated that the user of my dispenser will employ it in the same fashion that ordinary soap is used.

It will, of course, be understood that various changes may be made in the form, details, arrangements and proportions of the parts without departing from the scope of the invention as set forth in the appended claims.

What is claimed:

1. A liquid soap dispenser comprising a resilient and deformable container of plastic material including top, bottom, end and side walls, all of said walls being of substantially the same thinness, said top and bottom walls presenting relatively large and smooth outer surfaces, which are imperforate, said end walls presenting smooth imperforate outer surfaces of a lesser area than said top and bottom walls, and said side walls being flexible and presenting smooth surfaces of a lesser area than said top and bottom walls, said side walls each having a pair of normally closed slits disposed parallel to each other and arranged transversely with respect to said top and bottom walls, said slits extending completely through said side walls from the outer surfaces thereof to the inner surfaces thereof, whereby when pressure is applied to said top and bottom walls said side walls will deform to cause said slits to flex open and thereby discharge liquid soap from said container.

2. A liquid soap dispenser in accordance with claim **1** in which said plastic material is polyethylene having a thickness of approximately 1/32 inch and in which side walls curve outwardly.

3. A liquid soap dispenser in accordance with claim **2** in which said top and bottom walls also curve outwardly.

4. A liquid soap dispenser comprising a container of deformable plastic material having a top wall, a bottom wall and a smooth intermediate connecting wall of uniform thickness joined to said top and bottom walls to form a complete enclosure for liquid soap to be dispensed, said connecting wall being flexible and having normally closed slits therein extending in the direction of said top and bottom walls and coextensive with the thickness of said connecting wall so as to form outlets for said liquid soap when flexed open having a length equal to the thickness of said connecting wall, said transverse slits being the only slits forming said outlets and having a substantial spacing therebetween, and said top and bottom walls presenting relatively large surfaces compared with said connecting wall.

References Cited by the Examiner

UNITED STATES PATENTS

1,887,447	11/1932	Balinger	15—543 X
2,748,988	6/1956	Fromson	222—213 X
2,758,755	8/1956	Schafler	222—490 X
3,067,913	12/1962	Allison	222—212 X

FOREIGN PATENTS

1,143,977	4/1957	France.

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