Oct. 20, 1931. C. A. CRARY ET AL 1,828,361

CAKE OF SOAP

Filed Oct. 18, 1928

Fig. 1.

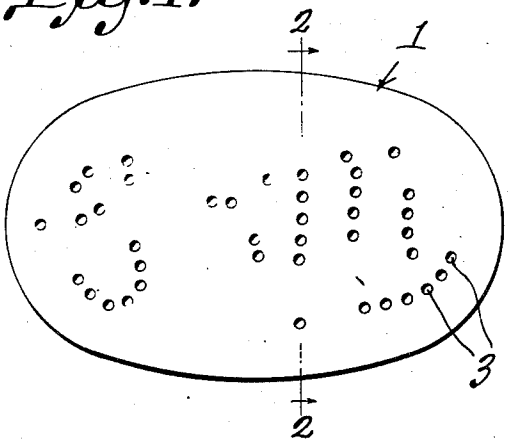


Fig. 2.

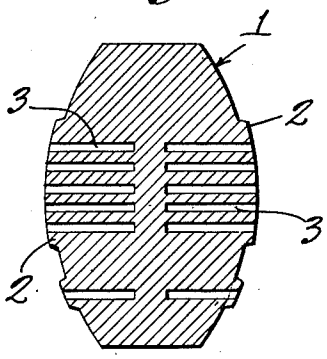


Fig. 3.

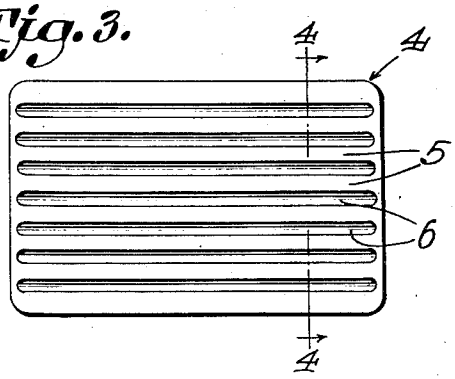


Fig. 4.

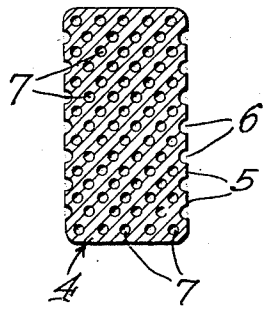


Fig. 5.

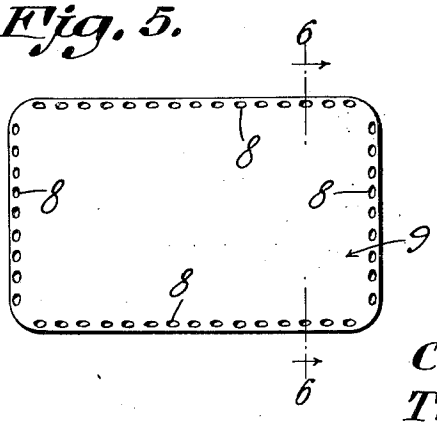
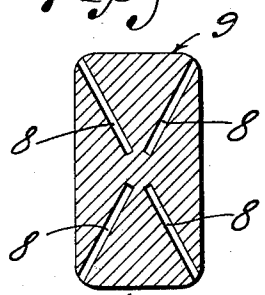


Fig. 6.



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UNITED STATES PATENT OFFICE

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CAKE OF SOAP

Application filed October 18, 1928. Serial No. 313,328.

This invention relates to soap in cake form, one of the objects being to provide a hard milled soap, cocoa soap, glycerine soap, etc., which is capable of floating without necessitating the use of foreign substances of a buoyant nature.

As is well known to those skilled in the art floating soaps have been made by beating air into the stock before molding the same into cakes. This has produced soap in cake form that will float but, because of the mass of minute air cells throughout the bulk of the cake, said cake has softened rapidly when placed in water, thereby causing considerable waste. Furthermore the cake has been easily broken.

The most desirable soap is a hard one, such as pumice, castile, cocoa, glycerine, or milled soap none of which soften readily but can usually be worn down to a thin wafer. Such soaps, however, are heavier than water and, therefore, will not float. For this reason only they are not preferred by some persons for use in lieu of the softer, less durable, but floating soaps.

It is an object of the present invention to provide any of the foregoing kinds of hard soap which will float, it being unnecessary to use any foreign buoyant substance for this purpose.

Another object is to provide a soap in which the means utilized for rendering it buoyant can also be employed as a means for outlining a distinctive name or mark which will remain in the soap and be legible at all times until the cake is worn to a thin wafer.

A further object is to provide a soap in which the means utilized for rendering it buoyant also serves to hasten the curing of the soap with the result that, instead of requiring a curing action extending over several months or more, the soap can be completely cured or hardened within a few weeks.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred forms of the invention have been shown.

In said drawings,

Figure 1 is a plan view of a cake of soap embodying the present improvements.

Figure 2 is a section on line 2—2, Figure 1.

Figure 3 is a plan view of another form of a cake of soap.

Figure 4 is a section on line 4—4, Figure 3.

Figure 5 is a plan view of another modified form.

Figure 6 is a section on line 6—6, Figure 5.

Referring to the figures by characters of reference, 1 designates a cake of hard soap such as herein mentioned which can be of any desired contour and size. In the structure illustrated a distinctive design has been molded on the cake as shown at 2 and this design has been outlined by a plurality of elongated recesses 3 extending inwardly close to the center of the cake. Each recess thus constitutes an air pocket and the total area of the recesses is sufficient to hold more than enough air to compensate for the slight difference in the specific gravity between the soap and water. Thus it will be seen that when a cake of soap provided with these air pockets is placed in a body of water sufficient air will be trapped in certain of the pockets to render the cake buoyant. As the cake is worn down through use the depth of the pockets will of course be reduced but as the size of the cake is correspondingly reduced the buoyancy of the cake will be maintained until the cake is reduced to a thin and substantially useless wafer.

Not only are the pockets or recesses 3 useful as a mean for trapping air and rendering the soap buoyant, but they are also useful because they preserve the distinctive name or mark outlined thereby, as the cake becomes worn. Thus the brand of the cake can be identified at different stages of use. A further important advantage resides in the fact that these pockets or recesses expose the interior portion

of the cake to the air so that the time required to completely harden the cake by curing is greatly reduced.

In Figures 3 and 4 there has been shown a cake of soap 4 the distinguishing mark on which consists of longitudinal ribs 5 formed between grooves 6 pressed into the opposed faces of the cake. Between these grooved faces are formed longitudinal cells 7 disposed in staggered relation and which have the same function as the cells 3 heretofore described. As the ribbed or corrugated faces of the cake become worn through, the cells 7 adjacent thereto will become exposed, thereby presenting additional ribs which will identify the brand. It might be added that these ribs have the further function of preventing the cake from slipping easily out of the hand.

In the form illustrated in Figures 5 and 6 the soap brand consists of a series of cells or pockets along the edges of the faces of the cake. These pockets or cells, indicated at 8, converge toward the center of the cake 9 and when the cake is placed in a body of water enough air will be trapped in some of the cells to render the cake buoyant.

When any of the cakes of soap are used the cells will become partly or entirely filled with lather but this will not reduce the buoyancy of the soap cake because air in sufficient quantities to render the cake buoyant will be mixed with the lather. Some of the cells will also become sealed by the compression of soap at the outer ends thereof but this obviously serves to trap the air in the cells.

What is claimed is:

1. A cake of milled soap having bores extending thereinto from opposed portions of the cake, said bores being of small diameter but of sufficient depth and number to render the cake buoyant, the outer ends of the bores being substantially open and the inner ends closed.

2. A cake of milled soap having bores extending thereinto from opposed portions of the cake, said bores being of small diameter but of sufficient depth to render the cake buoyant, the outer ends of the bores being substantially open and the inner ends closed, and cooperating to define a distinguishing mark irrespective of the shape to which the cake is worn by ordinary use.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures.

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THOMAS F. CRARY.