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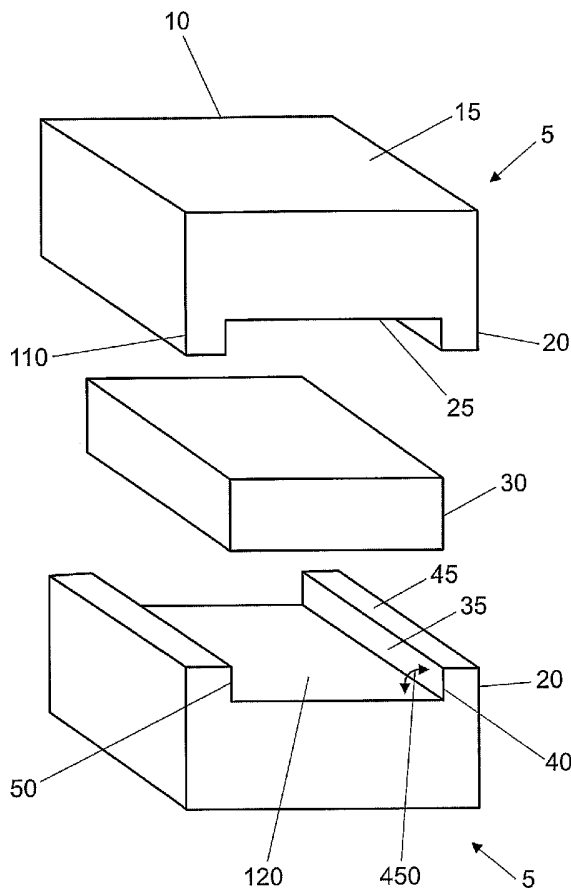
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(54) Title: SOAP BAR OR SUBSTANCE APPLICATION BAR



(57) Abstract: The substance application bar includes an application portion having an exterior surface and an interior surface and configured for applying a substance to a receiving surface and at least one blocking extension extending adjacent the interior surface of the application portion to define a retaining recess therebetween. The blocking extension and the interior surface are associated to cooperatively substantially block movement of an object received in the retaining recess in a direction generally along the interior surface against the blocking extension. The substance application bar may also include at least one bar-preserving extension associated with the interior surface to maintain a portion of the recess open to the atmosphere. This facilitates air flow through and drying of the recess for resisting deterioration of the bar. An assembly of application bars in stacked association is also included.



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## **SOAP BAR OR SUBSTANCE APPLICATION BAR**

### **FIELD OF INVENTION**

The present invention relates to a substance application bar that includes a  
5 blocking extension or a bar-preserving extension. It further relates to an assembly of  
application bars in stacked association.

### **BACKGROUND ART**

Many different forms of application bars, such as soap bars, have been  
10 described in the prior art. A significant disadvantage associated with the prior art soap bars  
is that the surfaces of the soap bars are often extremely slippery and may be hard to grasp  
firmly with the hands. It can be very frustrating to have to search for and pick up the soap  
that has slipped from one's hand into the bath tub when one is bathing or showering.  
Furthermore, it is desirable that the soap bar can be grasped by the user in such a fashion  
15 that the user may manipulate the soap bar in a brushing fashion having the largest flat area  
of the soap placed in physical contact with the body surface to be lathered.

U.S. Patent No. 4,618,443 discloses a soap bar structure which comprises an  
internal soap bar insert and an external scrub brush. The soap bar insert can be slid into the  
scrub brush by an interlocking groove. The scrub brush has a high outside surface friction  
20 which affords easy handling by the hands.

Two other examples which also employ a different material than soap  
include U.S. Patents No. 4,741,852 and 6,190,079. Both patents teach a soap bar structure  
which contains a fabric or nylon portion to afford easy handling.

These structures all share some common disadvantages. First of all, the  
25 requirement of a second material in addition to soap adds to the difficulty and expense of  
manufacturing. Secondly, the additional material may not be resistant to the high  
temperature treatment entailed when the soap mixture is poured into the mold. Lastly, since  
an extraneous structure is included in the soap bar, it might fall off when a portion of the  
soap is inevitably eroded.

30 U.S. Patent No. 5,071,583 discloses a soap bar comprising a projecting  
member which provides an aperture for receiving the user's fifth or little finger. This design  
has several disadvantages. Firstly, the irregular shape of the soap bar makes it more  
difficult to pack, transport and store. Secondly, this design puts too much strain on the little

finger, which is of course, typically the smallest and weakest finger on someone's hand. Lastly, the addition of a projecting member off the soap bar makes it aesthetically less appealing to users.

Therefore, there remains a need for a substance application bar having a  
5 generally conventional cake form, but which is easily and stably held and manipulated by the user during bathing or showering.

Another well recognized disadvantage of soap bars is the deterioration which the soap undergoes when it is left in a soap holder. Water tends to remain on the cake soap or soap bar after use. If the soap is not dried quickly after it is put in a soap holder the  
10 surface of the soap will frequently soften and erode away. This results in undue waste and a much shorter lifespan of the cake soap or soap bar. The problem is even more acute when, for example, the container used to hold the soap does not have holes at the bottom to drain water that may be retained on the surface of the soap. Another factor that increases the waste occurs when a large area of the soap container's bottom touches the soap, thus  
15 preventing the ventilation and drying of the soap.

Numerous attempts have been made to reduce or eliminate this deterioration. Most of the prior attempts focus on the designing of a soap holder which would afford a small touching interface. One such example is a soap case with a ribbed bottom surface as taught by U.S. Patent No. 5,509,529. Another extreme example of such an approach is an  
20 "X" shaped cord support of a soap bar wherein the bar is supported only by two lines.

Although these soap bar holders provide better ventilation, and thus faster drying of the soap bars, they may nevertheless shorten the lifespan of the soap by effecting a cut in the soap bar with the rib and the cords. Moreover, since all the above designs focus on the holder or case of the soap bars in order to preserve the soaps, they do not afford  
25 improvement in the soap bars themselves to achieve the preservation. The present invention eliminates the need for such specialized soap bar holders.

U.S. Patent No. 4,335,007 does disclose an improvement of the soap bar itself in order to retard the deterioration of the soap bar from the bottom. In that patent, a base portion of the soap is made to be substantially water insoluble. The desired material  
30 for the water insoluble base portion may be plastics, metals, formed plastics and the like. One obvious disadvantage of this design is that when the soap is provided from a heated mixture into the mold, the material for the base portion might not be able to withstand the

heat. The inclusion of another material in addition to the soap mixture will also raise the manufacturing cost of the soap bars.

Numerous patents have attempted to find other ways of preventing waste of soap by using the remaining fragments left of a soap bar. For example, U.S. Patent No. 3,931,035 discloses a soap bar with a hollowed-out core. The core is filled with small  
5 remaining pieces of soap bars and a congealed mass of a soap solution. Similarly, U.S. Patent No. 4,965,008 discloses a bar of soap having a recessed portion for receiving another used piece of soap. The used piece of soap may be adhered to a recessed portion of the bar by wetting the contact surface of the used piece of soap and the bottom surface of the  
10 recessed portion of the bar and depressing the used piece of soap into the recessed portion. U.S. Patent No. 5,250,210 discloses a soap bar construction for incorporating partially used soap bars to avoid waste. These soap bars have a top cavity to accommodate a partially used soap bar or components thereof for reuse and remolding of the soap components. A modification of the invention includes an end cavity arranged for further receiving soap bar  
15 components and a cap member arranged to direct the components within the soap bar for reuse. The bar is not designed for easy handling and does not address the problem of waste associated with prolonged exposure to fluids.

Thus, there still remains a need for a substance application bar which has the advantage of preventing waste by minimizing contact between the substance application bar  
20 and fluids such as water. Preferably the feature is afforded by some structure that is an integral part of the substance application bar that does not employ another material that might be destroyed by heat.

Soap bar containers, soap dishes, and packaging for soap bars are also well-known in the art. U.S. Patent No. 4,311,604 discloses a small soap bar embedded in the  
25 cavity of another, larger soap bar. The bottom of the cavity has an imprinted design, preferably having a raised design. As a result of the construction of this soap, it is possible to maintain the imprinted mark visible throughout the usage period of the soap bar even when the original imprinted mark on the surface of the smaller bar has already been washed or worn away.

30 U.S. Patent No. 4,858,757 discloses a combined package and dish structure for a soap bar product. A box is dimensioned to permit the soap bar product to be fitted therein. A plurality of rods extend between two opposing sides of the box near the bottom. When the box is used as a package, the soap bar product is positioned in the box resting on

the rods, and a covering is provided for the top of the box. When used as a soap dish, the box is inverted to permit the soap bar product to rest on top of the rods.

U.S. Patent No. 5,941,376 discloses a container for a soap bar where the container is formed from first and second mating sections that are hollowed out to form a soap bar-receiving chamber when the sections are mated. The container is constructed to  
5 minimize the chances of a wet soap bar sticking to the walls of the chamber and to facilitate air flow through the chamber.

These containers have not satisfactorily solved the above-mentioned problems because they do not aid in the grasping of the soap bar. Moreover, they do not  
10 provide the versatility of an application bar that may act as packaging, soap dish or the soap itself.

#### SUMMARY OF THE INVENTION

The present invention relates to a substance application bar, which is  
15 typically designed to be easy to grasp firmly without slipping and to avoid waste due to prolonged exposure to liquids. The substance application bar preferably includes an application portion having an exterior surface and an interior surface, and is configured for applying a substance to a receiving surface and at least one blocking extension extending adjacent the interior surface of the application portion to define a retaining recess  
20 therebetween. The blocking extension and the interior surface are advantageously associated to cooperatively substantially block movement of an object received in the retaining recess in a direction generally along the interior surface against the blocking extension.

In one embodiment, the application portion of the bar is configured for  
25 applying a substance by friction. Typically, the substance will be soap. Furthermore, in a preferred embodiment the application portion, at least one blocking extension, or both are made of the substance. The substance may further include ingredients selected, for example, to exfoliate the skin or to perform other additional functions.

Advantageously, the object can be, for example, a bar of soap, sponge,  
30 washcloth, loofah, or one or more of a user's fingers. Preferably the object is one or more of a user's fingers or another bar of soap received in the recess.

In one non-limiting embodiment the at least one blocking extension includes a plurality of blocking extension segments spaced from each other and positioned for

blocking the movement of the object. In yet another embodiment the application bar further includes at least one additional blocking extension extending adjacent the exterior surface of the application portion to define a retaining recess therebetween. In this embodiment the blocking extension and the exterior surface are associated to cooperatively substantially  
5 block movement of an object received in the retaining recess in a direction generally along the exterior surface against the additional blocking extension.

In a preferred embodiment, the at least one blocking extension comprises an upstanding wall. The wall may include a first portion disposed at an angle of about 75° to 120° with respect to the interior surface for blocking the movement of the object. The wall  
10 typically has an end portion in which the first portion is disposed. The height of the wall measured from the interior surface to the end portion is usually at least about 1/8 of an inch and less than about 2 inches.

The wall may include at least two upstanding walls disposed and configured for substantially blocking movement of the object in a plurality of directions against the  
15 walls. The upstanding walls may be disposed on opposite sides of the retaining recess for retaining the object laterally therebetween. The upstanding walls may also be spaced at less than about 5 inches. In a preferred embodiment, the recess is open on at least one end between the walls.

In another preferred embodiment, the upstanding walls are substantially  
20 parallel to each other. At least one additional upstanding parallel wall may be disposed adjacent to at least one of the upstanding walls defining a gap therebetween.

The present invention also relates to a substance application bar, which includes  
an application portion having an exterior surface and an interior surface made of a substance  
25 that can deteriorate when exposed to a fluid and configured for applying a substance to a receiving surface. The substance application bar also includes at least one bar-preserving extension extending adjacent the interior surface of the application portion to define an open recess therebetween. The bar-preserving extension and the recess are configured to  
maintain a portion of the recess open to the atmosphere to facilitate air flow through, and for  
30 drying of, the recess for resisting deterioration of the bar. In a preferred embodiment, the substance is soap. Typically, the application portion is made of the substance.

The present invention further relates to an assembly of substance application bars. The assembly includes at least two application bars in stacked association for

blocking relative movement in at least one direction between the bars. At least two of the bars include an application portion having an exterior surface and an interior surface and configured for applying a substance to a receiving surface, and at least one extension extending adjacent the interior surface of the application portion to define a recess  
5 therebetween. At least one of the bars is in the stacked association with the extension of another of the bars.

At least one of the bars may also be in interjoined association with the extension of another of the bars. In this case, the recess of one of the at least two bars may be configured and dimensioned to interlockingly receive the extension of another of the at  
10 least two bars. In one embodiment, the bars are made of soap.

The at least two bars may further include first and second bars defining a cavity therebetween, and the bars may further comprise a third product received in the cavity in stacked association with the first and second bars. In a preferred embodiment, the third product is another bar. Furthermore, the cavity may be shaped to receive the product.  
15

#### BRIEF DESCRIPTION OF THE DRAWINGS

Further features and advantages of the invention can be ascertained from the detailed description that is provided below in connection with the following drawing(s):

FIG. 1 illustrates a preferred embodiment of a substance application bar  
20 according to the present invention;

FIG. 2 illustrates a substance application bar according to the present invention where the object is a user's fingers;

FIG. 3 illustrates a plurality of blocking extension segments of a substance application bar according to the present invention;

FIG. 4 illustrates an additional blocking extension of a substance application bar according to the present invention;  
25

FIG. 5 illustrates one embodiment of a substance application bar with an additional blocking extension according to the present invention;

FIG. 6 illustrates another embodiment of a substance application bar with an additional blocking extension according to the present invention;  
30

FIG. 7 illustrates a recess substantially surrounded by a blocking extension of a substance application bar according to the present invention;



FIG. 8 illustrates an additional upstanding parallel wall of a substance application bar and an interlocking mechanism of an assembly of substance application bars according to the present invention;

FIG. 9 illustrates a preferred embodiment of an assembly of substance application bars according to the present invention;

FIG. 10 illustrates an interlocking mechanism of an assembly of substance application bars according to the present invention; and

FIG. 11 illustrates an assembly formed by the interlocking mechanism of an assembly of substance application bars according to the present invention.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention relates to a substance application bar that overcomes the disadvantages of the soap bars of the prior art. The substance application bar of the present invention has the further advantage that the application bar is easy to grasp with the hands, thus preventing the bar from slipping when applying the bar to a receiving surface. Another potential advantage afforded by the present invention is that it inhibits the deterioration of the bar with bar-preserving extensions.

Referring to FIG. 1, the substance application bar **5** of the present invention includes an application portion **10** having an exterior surface **15** and an interior surface **120** and configured for applying a substance to a receiving surface and at least one blocking extension **20** extending adjacent the interior surface **120** of the application portion **10** to define a retaining recess **25** therebetween, the blocking extension **20** and the interior surface **120** being associated to cooperatively substantially block movement of an object **30** received in the retaining recess **25** in a direction generally along the interior surface **120** against the blocking extension **20**. By "substantially block" is meant to stop, obstruct, or impede the passage of or movement of the object **30** along at least 25% of the distance along interior surface **120**, preferably at least 10%. Moreover, the object **30** is preferably substantially the same shape and size as the retaining recess **25**.

The application portion **10** is usually configured for applying the substance by friction, as when applying the substance directly to the receiving surface. The extensions **20**, **110** of the application bar **5** of the present invention form a retaining recess **25** with which the hands can grasp the application bar **5**.

Preferably, the object **30** is one or more of a user's fingers **410** as can be seen in FIG. 2. Typically, a user would grip the application bar **5** with his hand **400** such that his three middle fingers **410** fit easily into the retaining recess (not shown), while the thumb **420** and little finger **430** grip the outer edges. This point of positioning provides a control point which permits the user to manipulate the bar in a gripping fashion as well as provide a free and open area of the application portion **10** for contact with the receiving surface. An additional recess on one of the outer edges of the application bar (not shown) for the thumb **420** or little finger **430** may be included, but should be positioned in such a way that does not compromise the retaining recess.

10 In addition, the application portion may act as a container for the substance. In this case, the substance can be dispensed onto the application portion when the application bar is squeezed. Alternatively, the substance can be applied to the application portion.

Moreover, to facilitate easy application to the receiving surface, the application portion may be made of the substance. The blocking extension may also be made of the substance. The substance may be any substance that one usually applies to a surface, such as cosmetic formulations, cleaning substances, waxes or polishes. In a preferred embodiment, the substance to be applied is soap, and the application bar is made of the soap. Preferably, the soap contains glycerin or olive oil and does not contain any animal by-products. The soap may also contain ingredients selected to exfoliate the skin, such as, for example, walnut shells or beads.

Several non-limiting examples of soap combinations that can be used in the present invention include: (1) saponified (olive, castor, palm and coconut) oils, vegetable glycerin, soybean oil, essential oils, and FD&C color; (2) sodium cocoate, sodium palmate, ricinus communis (castor) seed oil, carthamus tinctorius (safflower) seed oil, glycerin, water, sorbitol, sorbitan oleate, and glycine soja (soybean) protein; (3) propylene glycol, sorbitol, glycerin, olea europaea (olive) fruit oil, sodium laureth sulfate, sodium stearate, sodium myristate, sodium cocoyl isethionate, triethanolamine, water, and aloe barbadensis leaf; (4) propylene glycol, sorbitol, glycerin, sodium laureth sulfate, sodium stearate, sodium myristate, sodium cocoyl isethionate, triethanolamine, and water; and (5) propylene glycol, sorbitol, glycerin, sodium laureth sulfate, sodium stearate, sodium myristate, sodium cocoyl isethionate, triethanolamine, water, and silica.

In FIG. 1, the object **30** is another bar of soap. Here, the application bar **5** may also function as a soap dish for the object **30**. The application bar **5** may be disposed of when the bar of soap **30** has been used up, or may be retained for continued use.

Referring to FIG. 3, the blocking extension **20** may include a plurality of  
5 blocking extension segments **55**, **60** spaced from each other and positioned for blocking the movement of the object **30**. The segments **55**, **60** may be spaced from about 1 inch to about 5 inches apart, preferably from about 2 inches to about 4 inches, and more preferably from about 2 inches to about 3.5 inches. As can readily be seen, the object **30** is blocked from movement in two directions, *i.e.*, along the x and y axis, against the interior surface **120**.

10 Referring to FIG. 4, at least one additional blocking extension **65** may extend adjacent to the exterior surface **70** of the application portion, the additional blocking extension **65** extending adjacent the exterior surface **70** of the application portion **75** to define a retaining recess **80** therebetween, the blocking extension **65** and the exterior surface **70** being associated to cooperatively substantially block movement of an object **30** received  
15 in the retaining recess **80** in a direction generally along the exterior surface **70** against the additional blocking extension **65**. While this may not be ideal for direct application to the receiving surface, it may still be used. For example, when the application bar is made of soap, one using the bar may use both the exterior and interior surfaces of the application portion to soap up a washcloth. The washcloth with the soap can then be applied to the  
20 body.

FIG. 5 and FIG. 6 illustrate other embodiments of the application bar with an additional blocking extension **65**. These embodiments further show that the edges of the application bar need not be straight, but may be curved.

In FIG. 1, the blocking extension **20** includes an upstanding wall **35**. The  
25 wall **35** will typically include a first portion **40** disposed at an angle **450** of about 40° to 140°, more preferably of about 60° to 130° or about 75° to 120°, and most preferably of about 80° to 110° or about 90° to 105°, with respect to the interior surface **120** for blocking the movement of the object **30**. In a preferred embodiment, the angle **450** is 90°. FIG. 5 and FIG. 6 show the angle **450** in embodiments of the application bar where the edges are  
30 curved.

The wall **35** in FIG. 1 usually includes an end portion **45** in which the first portion **40** is disposed. The height of the wall **35** measured from the interior surface **120** to the end portion **45** is at least about 1/8 of an inch and less than about 2 inches. In a

preferred embodiment, the height of the wall **35** is about 3/8 of an inch, and in a more preferred embodiment, the height of the wall **35** is about 5/8 of an inch. The distance from the end portion **45** to the exterior surface **15** of the application portion of the bar is typically from about 1 inch to about 4 inches, preferably about 1 3/4 inches to about 3 1/2 inches, most preferably from about 1 1/2 inches to about 3 inches.

Generally, the wall **35** in FIG. 1 will include at least two upstanding walls **35**, **50** disposed and configured for substantially blocking movement of the object **30** in a plurality of directions against the walls **35**, **50**. In one embodiment, the upstanding walls **35**, **50** are disposed on opposite sides of the retaining recess **25** for retaining the object **30** laterally therebetween. The upstanding walls **35**, **50** will usually be substantially parallel to each other. In addition, the upstanding walls **35**, **50** may be spaced at less than about 5 inches, preferably spaced from about 1 inch to about 3 1/2 inches apart, and more preferably spaced from about 1 1/2 inches to about 2 inches apart. In addition, the upstanding walls **35**, **50** may also be perpendicular to each other.

Usually, the recess **25** remains open on at least one end between the walls **35**, **50**. It is possible, however, for the recess **25** to be substantially surrounded by the blocking extension **90** as can be seen in FIG. 7.

Referring to FIG. 8, the application bar may further include at least one additional upstanding parallel wall **100** disposed adjacent to at least one of the upstanding walls **95** defining a gap **105** therebetween. This additional upstanding parallel wall **100** does not typically act as a blocking extension.

Additionally, FIG. 1 shows that the substance application bar **5** of the present invention may include an application portion **10** having an exterior surface **15** and an interior surface **120** made of a substance that can deteriorate when exposed to a fluid and configured for applying a substance to a receiving surface and at least one bar-preserving extension **20** extending adjacent the interior surface **120** of the application portion **10** to define an open recess **25** therebetween, the bar-preserving extension **20** and the recess **25** being configured to maintain a portion of the recess **25** open to the atmosphere to facilitate air flow through and for drying of the recess **25** for resisting deterioration of the bar **5**.

The extensions **20**, **110** in FIG. 1 are of sufficient length that the contact between the bar **5** and a bar holder in between uses is minimized. The length of the extensions **20**, **110** measured from the interior surface **120** to the end of the extension **20** is at least about 1/8 of an inch and less than about 2 inches. In a preferred embodiment, the

length of the extension is about 3/8 of an inch, and in a more preferred embodiment, the length of the extension is about 5/8 of an inch. As a result, any fluid that is transferred to the surface of the bar holder from the application bar after use does not touch the bar except for the extensions. This has the significant advantage of avoiding the erosion of that area of the application bar, and thus preserving the application bar. The extension of the lifespan of the application bar is also achieved by the fact that the extensions of the application bar provide an open recess between the application bar and the surface of the bar holder. This recess greatly facilitates the ventilation, and thus the drying of the surface of the application bar that does not touch the surface of the bar holder. The recess may act as a moisture hole, which acts to drain fluid away from the bar. This drying further reduces the erosion of the bar and extends its lifespan. In a preferred embodiment, the substance is soap, and the application portion is made of soap.

Referring to FIG. 9, the present invention also relates to an assembly of substance application bars **200**, which include at least two application bars **205**, **210** in stacked association for blocking relative movement in at least one direction between the bars where at least two of the bars include an application portion **215** having an exterior surface **220** and an interior surface (not shown) and configured for applying a substance to a receiving surface, and at least one extension **225** extending adjacent the interior surface of the application portion **215** to define a recess **230** therebetween, wherein at least one of the bars is in the stacked association with the extension **260** of another of the bars. By "stack" is meant to arrange in an orderly pile such that one bar is on top of the other.

One of the bars may also be in interjoined association with the extension of another bar. By "interjoin" is meant to unite into an integrated whole. Interjoining includes interlocking, hooking, dovetailing, and the like.

Referring to both FIG. 8 and FIG. 10, one can see that the recess **250** of one of the at least two bars can be configured and dimensioned to interlockingly receive the extension **255** of another of the at least two bars. FIG. 11 shows that the two bars in FIG. 10 interlock to form a single piece.

In FIG. 9, the at least two bars include first and second bars **205**, **210** defining a cavity **235** therebetween, and the bars further comprise a third product **240** received in the cavity **235** in stacked association with the first and second bars **205**, **210**. In a preferred embodiment, the product **240** is a third bar, and the cavity **235** is preferably shaped to receive the bar. The product received in the cavity is not limited to bars.

Acceptable products include other bath products, such as washcloths, shampoos, conditioners, bath beads, bath oil, body wash, sponges, loofahs, brushes, bubble bath, bath softgels, bath oils, bath lotions, bath salts, body lotions, body mists, massage oils, shower gels, exfoliators, spa accessories, and the like. Any product, though not associated with the bath, may also be received in the cavity, such as candles, cosmetic products, or air fresheners. The products are preferably shaped to fit snugly into the cavity to prevent them from sliding out. Most preferably, the products to be placed in the cavity are similar in shape and size to the cavity. The cavity is usually rectangular or round in shape, but may be shaped in any convenient way to hold an additional product.

10           The assembly may further be used to package the product. In a preferred embodiment, the assembly will be rectangular in shape to provide for efficient storage. When the bars are made of soap, parts of the assembly may be used as a soap dish or as the soap itself. This minimizes consumer waste, which is an ever increasing problem. Moreover, this type of packaging allows as many parts of the invention to be reused and recycled as possible, and thus prevents the waste of material.

15           The individual bars of the assembly may be separately wrapped or the assembly may be wrapped as a whole. They may be wrapped in any kind of packaging material usually used to wrap application bars or other beauty products, such as plastics or paper. Additional packaging, such as a box of sufficient size to hold the assembly, may be used to hold the entire assembly. When this is the case, supplementary products may be included in the box, such as sponges, soap dishes or other products.

20           It should be understood that the term "application bar" as used herein is intended to include not only rectangular bars, as shown, but bars of various shapes known in the art, such as disk-shaped or circular bars. Moreover, the term "about," as used herein, should generally be understood to refer to both numbers in a range of numerals. Moreover, all numerical ranges herein should be understood to include each whole integer within the range.

25           Numerous modifications and changes will be readily evident to those skilled in the art. It is therefore understood that this invention is not limited to the specific embodiments disclosed. Accordingly, all expedient modifications readily attainable by one of ordinary skill in the art from the disclosure set forth herein, or by routine experimentation therefrom, are deemed to be within the spirit and scope of the invention as defined by the appended claims.

EXAMPLE

The following example is not intended to limit the scope of the invention, but merely to illustrate representative possibilities concerning the present invention.

5    Example 1: An Assembly of Substance Application Bars According to the Invention

10        The accompanying FIG. 9 illustrates an exemplary assembly of substance application bars constructed according to the present invention. Substance application bars **205**, **210** were formed from a combination of saponified (olive, castor, palm and coconut) oils, vegetable glycerin, soybean oil, essential oils, and FD&C color. Edges **300** and **310** define surface **500** of application bar **205**. Surface **500** was made to measure about 3 inches in length and 3 inches in width. Edges **300**, **320**, **330**, **340**, and **370** define surface **520**. Edge **300** was made to measure about 3 inches in length. Edge **320** was made to measure about  $1 \frac{7}{16}$  inches, making the whole assembly about  $2 \frac{7}{8}$  inches in height. Edge **330** was made to measure about  $\frac{3}{8}$  of an inch in length, while edge **340** was made to measure about  $2 \frac{1}{4}$  inches in length. Edge **370** was made to measure about 1 inch in height. The bar **240** was formed from a combination of saponified (olive, castor, palm and coconut) oils, vegetable glycerin, soybean oil, essential oils, and FD&C color. The bar **240** was made to have edge **350**, which measured about  $2 \frac{1}{8}$  inches in length, and edge **360**, which measured about  $\frac{7}{8}$  of an inch in height.

## THE CLAIMS

What is claimed is:

1. A substance application bar, comprising:  
an application portion having an exterior surface and an interior surface and configured for applying a substance to a receiving surface; and  
at least one blocking extension extending adjacent the interior surface of the application portion to define a retaining recess therebetween, the blocking extension and the interior surface being associated to cooperatively substantially block movement of an object received in the retaining recess in a direction generally along the interior surface against the blocking extension.
2. The application bar of claim 1, wherein the application portion is configured for applying the substance by friction.
3. The application bar of claim 1, wherein the object is one or more of a user's fingers.
4. The application bar of claim 1, wherein the application portion is made of the substance.
5. The application bar of claim 4, wherein the at least one blocking extension is made of the substance.
6. The application bar of claim 4, wherein the substance is soap.
7. The application bar of claim 6, wherein the substance further comprises ingredients selected to exfoliate the skin.
8. The application bar of claim 6, wherein the object is another bar of soap.



9. The application bar of claim 1, wherein the at least one blocking extension comprises a plurality of blocking extension segments spaced from each other and positioned for blocking the movement of the object.

10. The application bar of claim 1, further comprising at least one additional blocking extension extending adjacent the exterior surface of the application portion to define a retaining recess therebetween, the blocking extension and the exterior surface being associated to cooperatively substantially block movement of an object received in the retaining recess in a direction generally along the exterior surface against the additional blocking extension.

11. The application bar of claim 1, wherein the at least one blocking extension comprises an upstanding wall.

12. The application bar of claim 11, wherein the wall comprises a first portion disposed at an angle of about 75° to 120° with respect to the interior surface for blocking the movement of the object.

13. The application bar of claim 12, wherein the wall has an end portion in which the first portion is disposed.

14. The application bar of claim 13, wherein the height of the wall measured from the interior surface to the end portion is at least about 1/8 of an inch and less than about 2 inches.

15. The application bar of claim 11, wherein the wall comprises at least two upstanding walls disposed and configured for substantially blocking movement of the object in a plurality of directions against the walls.

16. The application bar of claim 15, wherein the upstanding walls are disposed on opposite sides of the retaining recess for retaining the object laterally therebetween.

17. The application bar of claim 16, wherein the upstanding walls are spaced at less than about 5 inches.

18. The application bar of claim 15, wherein the recess is open on at least one end between the walls.

19. The application bar of claim 15, wherein the upstanding walls are substantially parallel to each other.

20. The application bar of claim 19, further comprising at least one additional upstanding parallel wall disposed adjacent to at least one of the upstanding walls defining a gap therebetween.

21. A substance application bar, comprising:  
an application portion having an exterior surface and an interior surface made of a substance that can deteriorate when exposed to a fluid and configured for applying a substance to a receiving surface; and  
at least one bar-preserving extension extending adjacent the interior surface of the application portion to define an open recess therebetween, the bar-preserving extension and the recess being configured to maintain a portion of the recess open to the atmosphere to facilitate air flow through and for drying of the recess for resisting deterioration of the bar.

22. The application bar of claim 21, wherein the substance is soap.

23. The application bar of claim 21, wherein the application portion is made of the substance.

24. An assembly of substance application bars, comprising:  
at least two application bars in stacked association for blocking relative movement in at least one direction between the bars, at least two of the bars comprising:  
an application portion having an exterior surface and an interior surface and configured for applying a substance to a receiving surface, and

at least one extension extending adjacent the interior surface of the application portion to define a recess therebetween;  
wherein at least one of the bars is in the stacked association with the extension of another of the bars.

25. The assembly of claim 24, wherein the bars are made of soap.

26. The assembly of claim 24, wherein at least one of the bars is in interjoined association with the extension of another of the bars.

27. The assembly of claim 26, wherein the recess of one of the at least two bars is configured and dimensioned to interlockingly receive the extension of another of the at least two bars.

28. The assembly of claim 24, wherein the at least two bars comprise first and second bars defining a cavity therebetween, and the bars further comprise a third product received in the cavity in stacked association with the first and second bars.

29. The assembly of claim 28, wherein the third product is another bar.

30. The assembly of claim 28, wherein the cavity is shaped to receive the product.



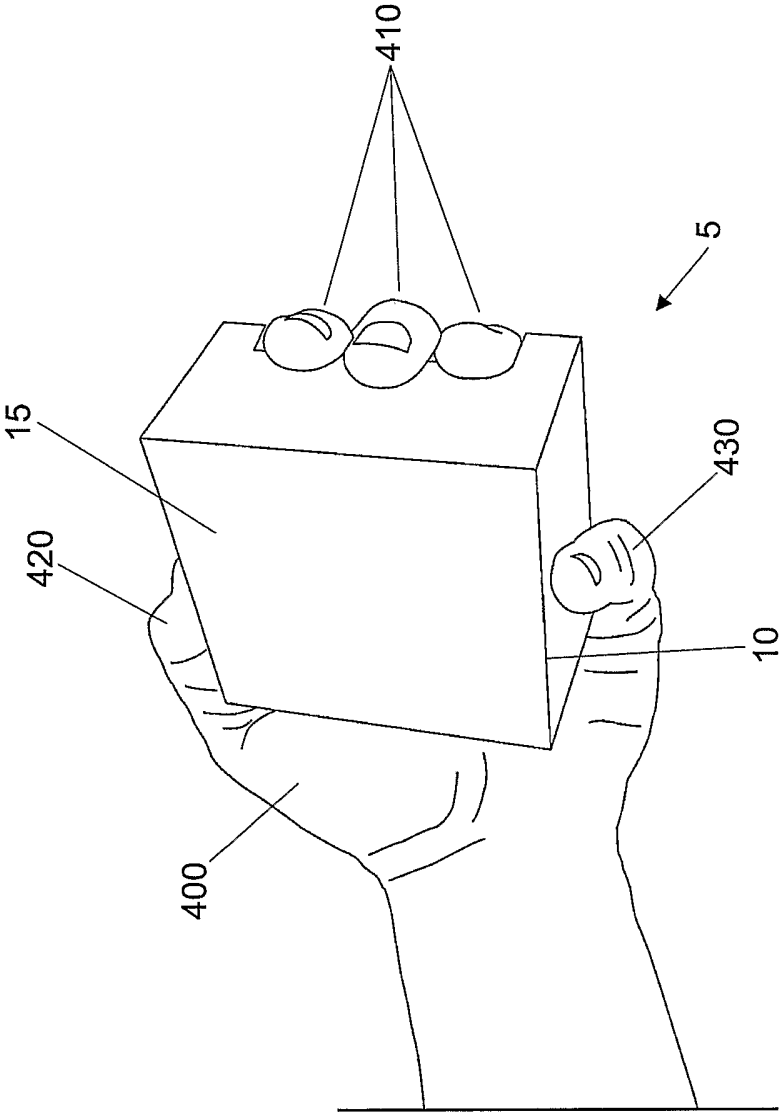


Fig. 2

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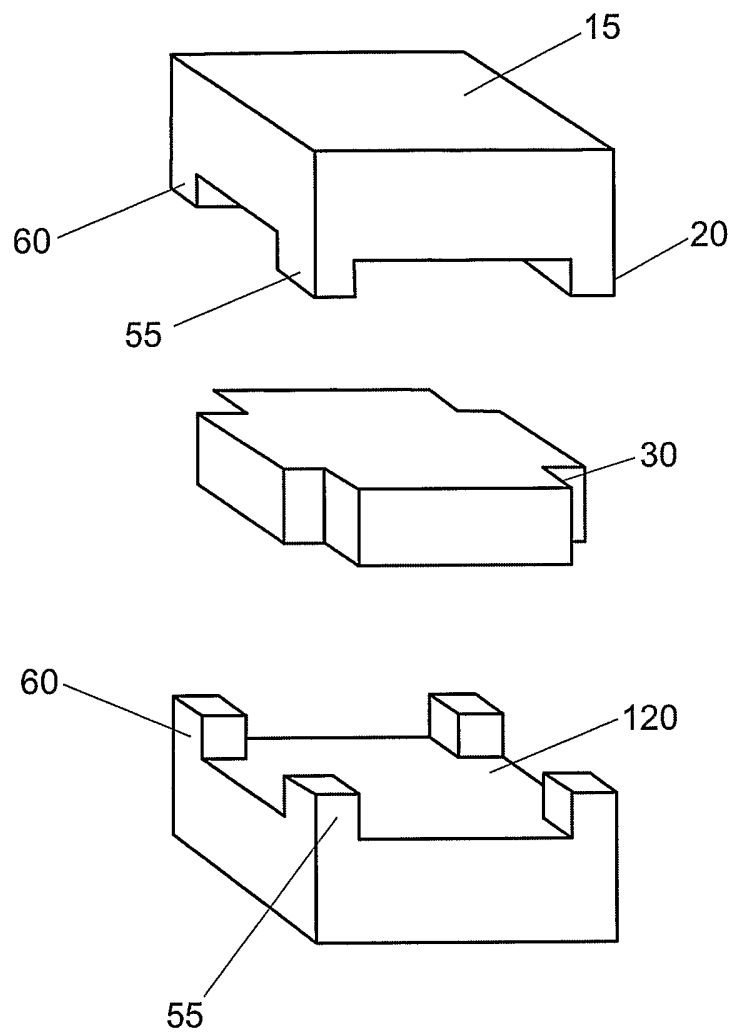


Fig. 3

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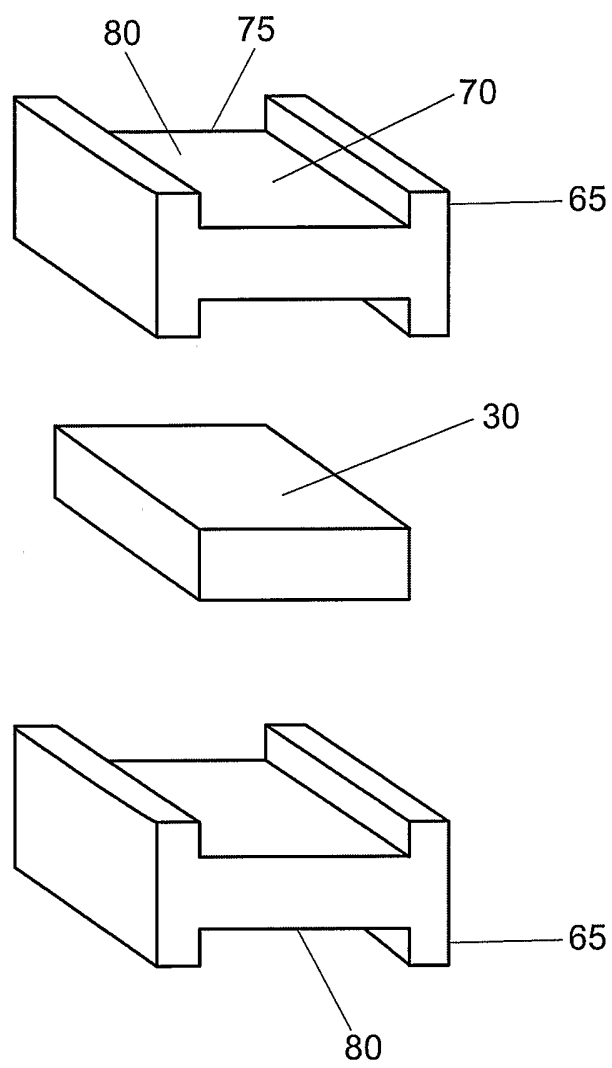


Fig. 4

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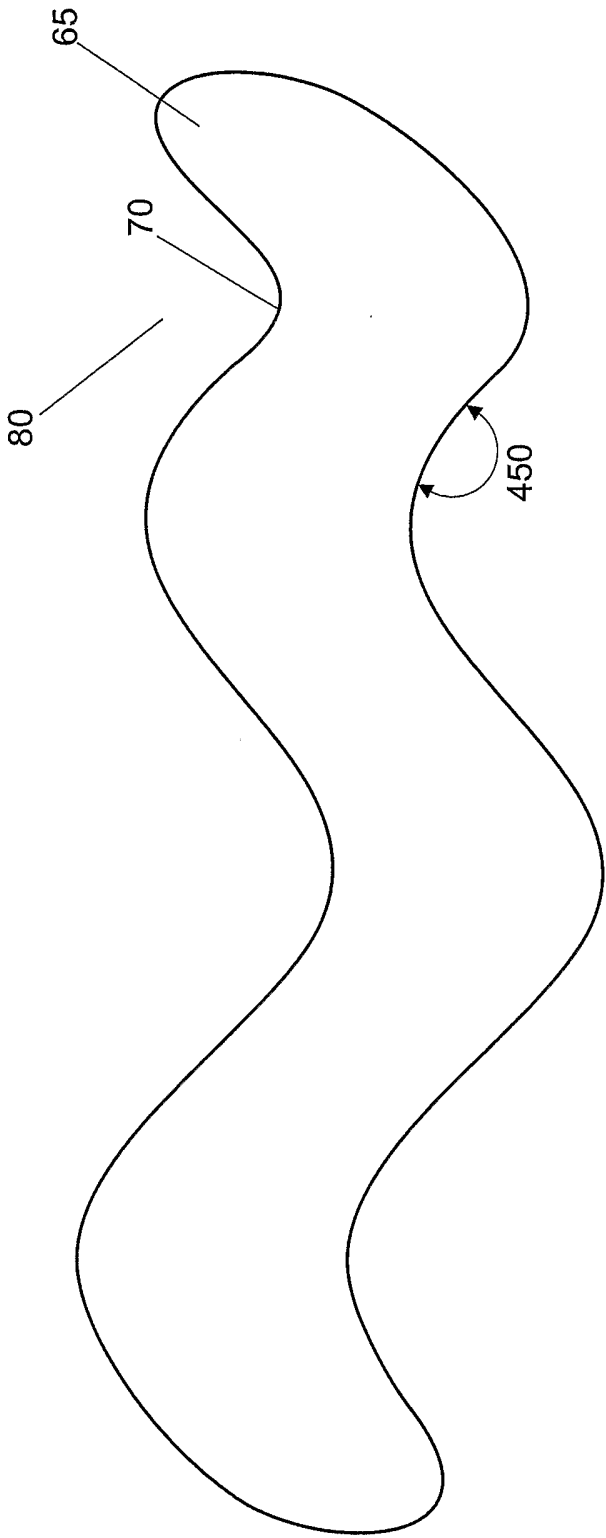


Fig. 5



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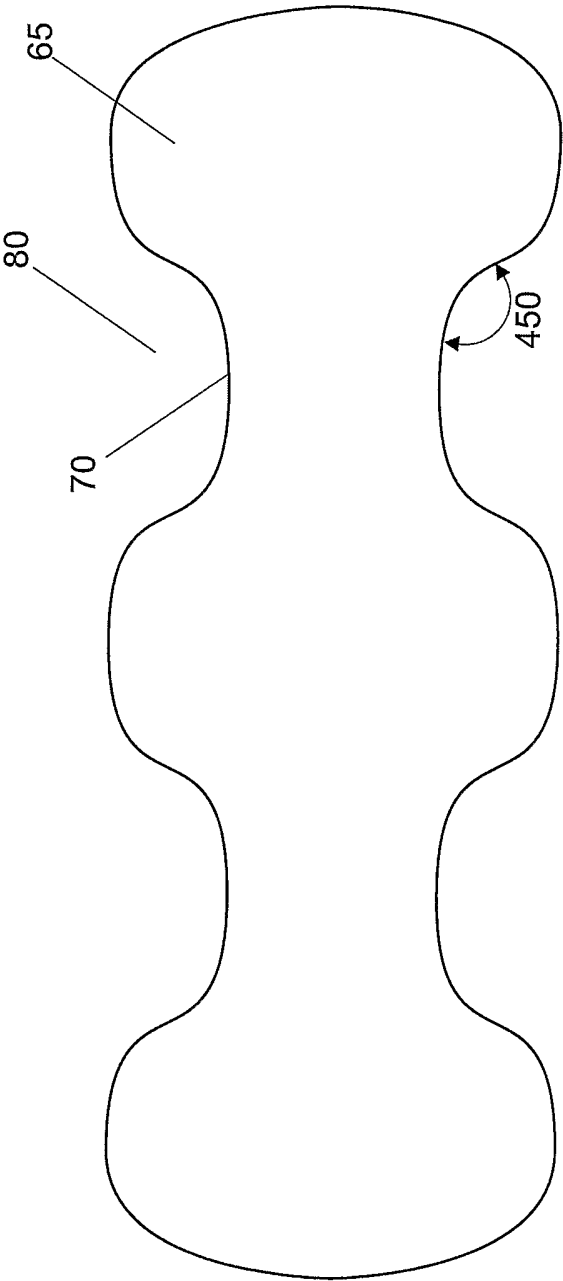


Fig. 6

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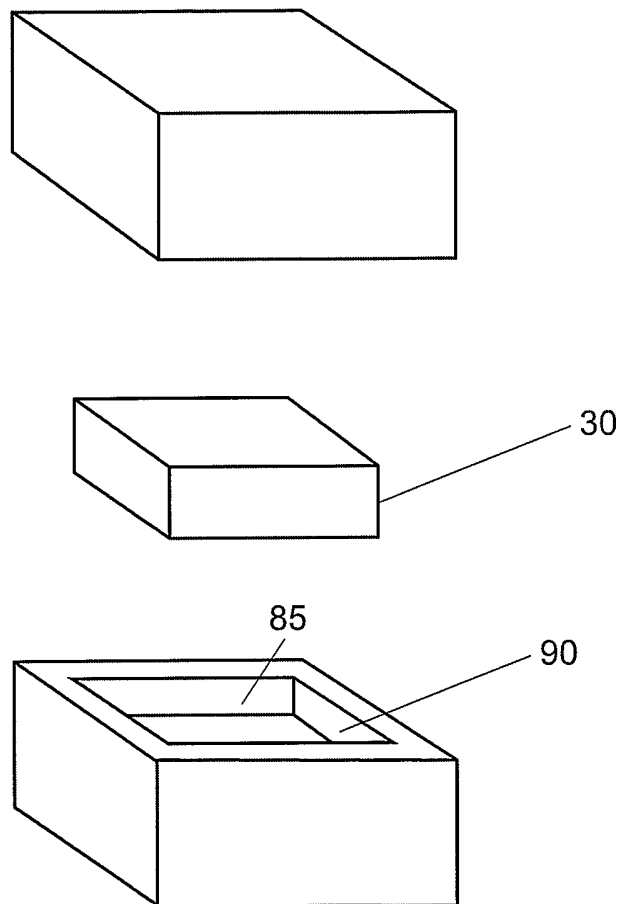


Fig. 7

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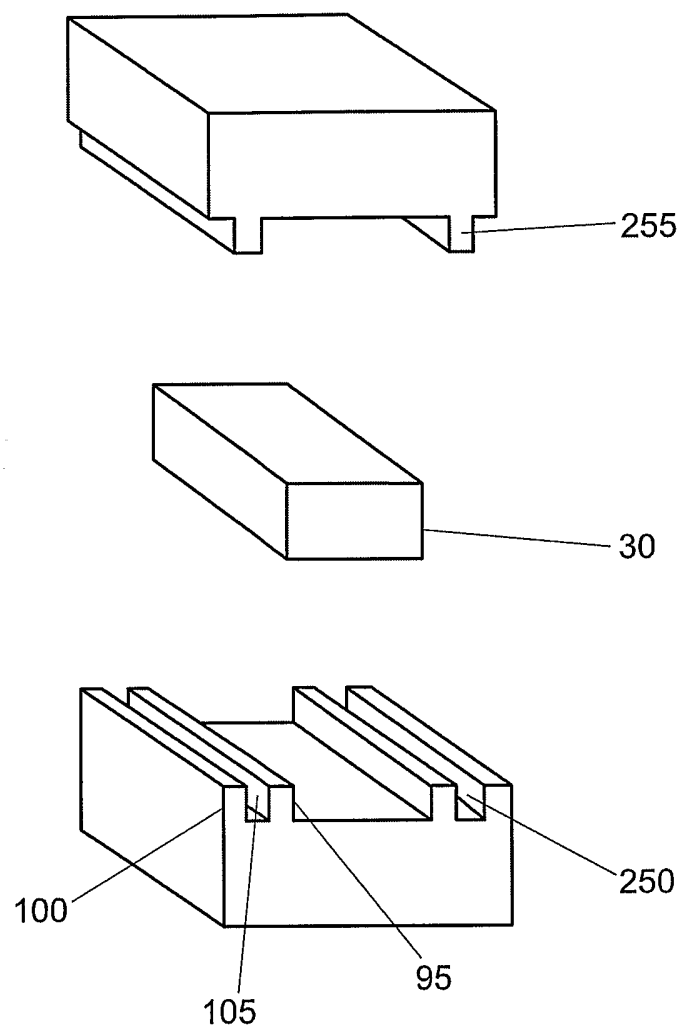
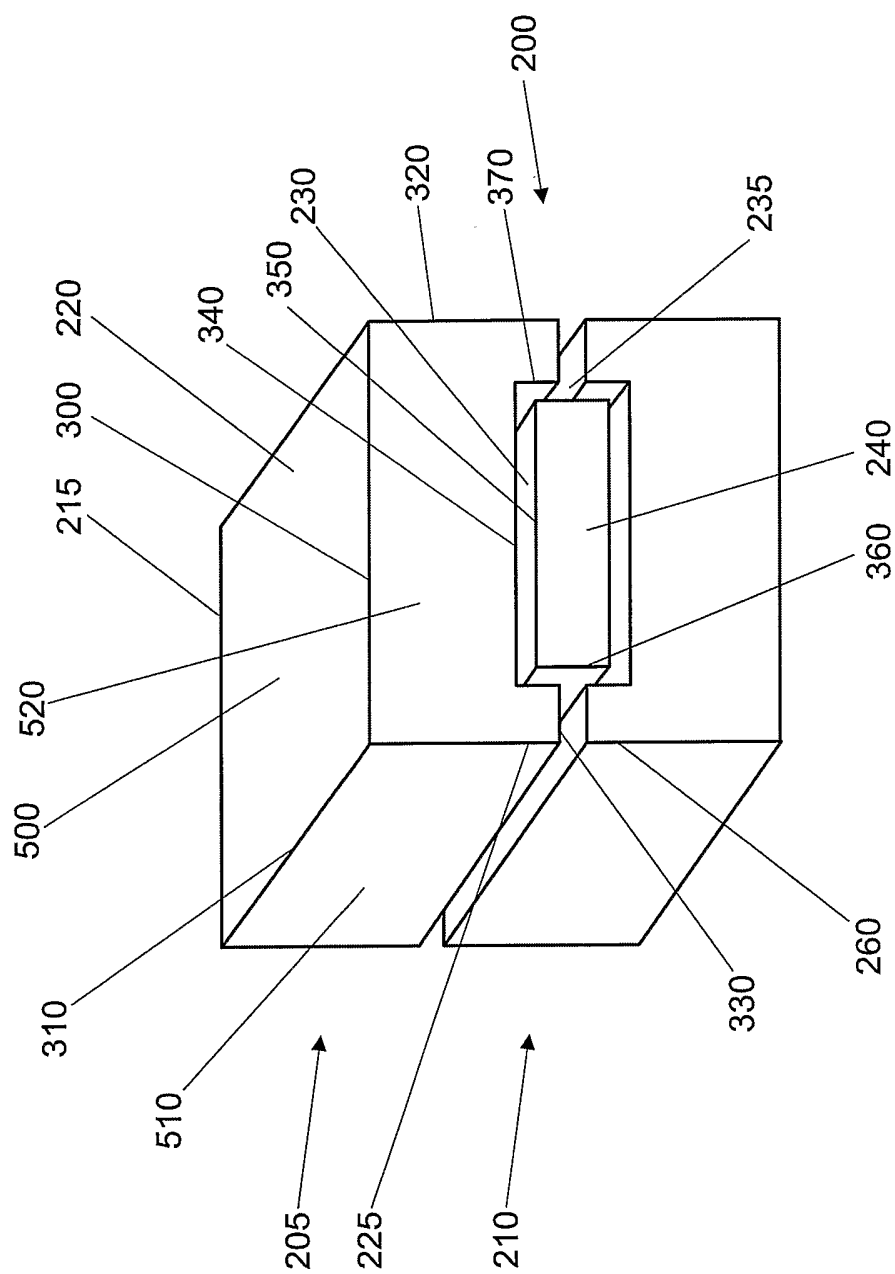


Fig. 8

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**Fig. 9**

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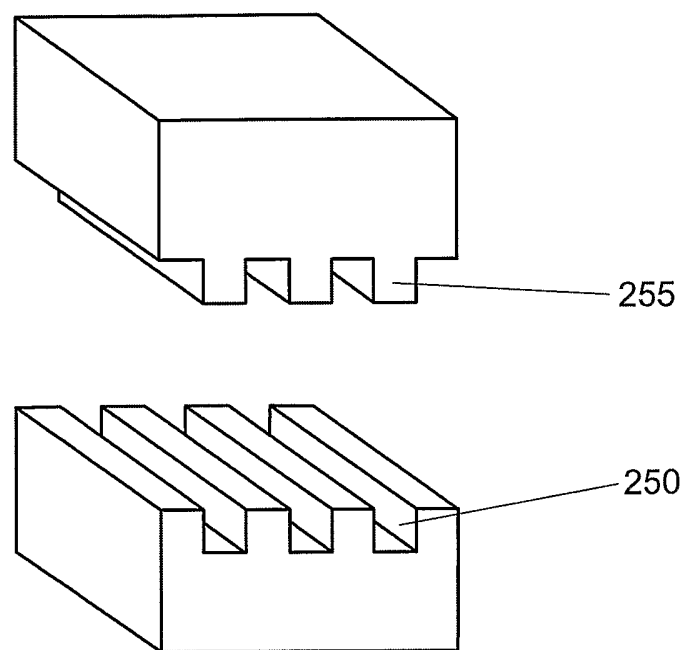


Fig. 10

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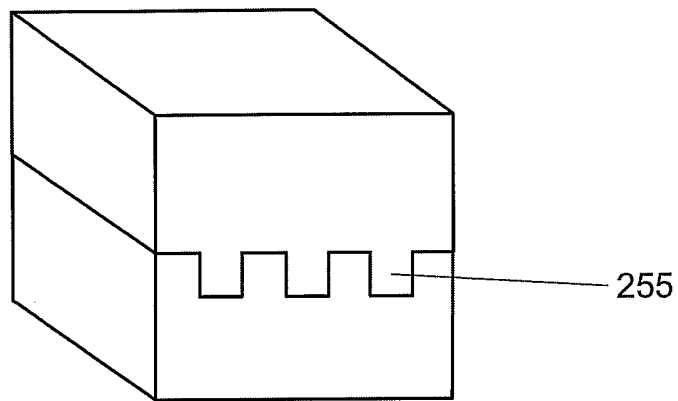


Fig. 11