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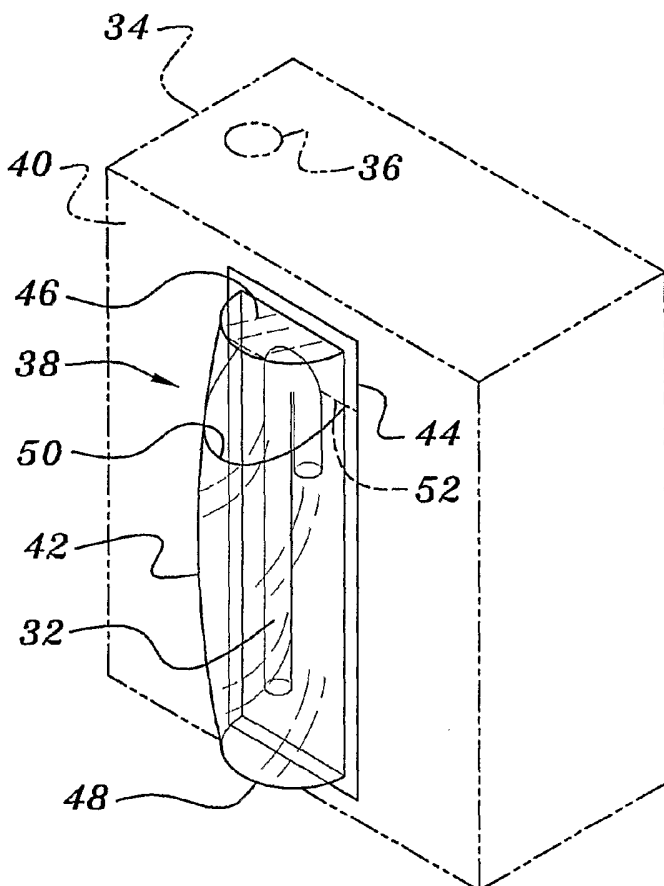
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[Continued on next page]

(54) Title: RUPTURABLE BUBBLE PACKAGE



(57) Abstract: A rupturable bubble package (38) for containing an implement (32) such as, for example, a drinking straw is disclosed. The bubble package (38) is characterized by its construction from a flexible, substantially impervious material capable of maintaining a positive pressure when sealed with the implement (32) inside. A weakened portion (50) is provided on at least one surface of the package (38) whereby the weakened portion (50) will rupture when the package (38) is squeezed, thereby providing access to the implement (32) for its removal and use.



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Entitled: RUPTURABLE BUBBLE PACKAGE

## BACKGROUND OF THE INVENTION

### Field of the Invention

5           The present invention relates to a rupturable bubble package for containing an implement. While a first preferred embodiment will be described wherein the implement is a drinking straw, it is to be understood that the particular implement placed within the package of this invention is not to be considered a limiting factor on the scope of the invention. In fact, it is contemplated that the present invention would  
10       have utility for a variety of implements including, for example, even sterilized, medical or surgical instruments.

          The invention is characterized by its construction from a flexible, substantially impermeable material to define an enclosure into which the implement is inserted and sealed. By "substantially impervious" the inventor means a material capable of  
15       maintaining a quantity of fluid inside the enclosure, preferably a gas such as, for example, air or an inert, sterilized gas, when the package is sealed. The package comprises a front panel, a back panel, and opposed top and bottom panels that are disposed in interconnecting relation between the front and back panels to define the enclosure into which the implement is placed. A weakened portion is formed on at

least one of the front, back, top and side panels such that squeezing the sealed enclosure between one's thumb and fingers will cause the weakened portion to rupture, thereby permitting access to the implement.

Thus, the rupturable bubble package of this invention provides for sanitary  
5 containment and transport of the implement placed therein, while also permitting easy access to the implement by rupturing the package as described above.

### **Description of the Prior Art**

The prior art teaches a variety of what might be described as rupturable packages for numerous articles or implements. For example, common drinking  
10 straws are typically enclosed within a paper package, and that package is torn, or ruptured, to obtain access to the straw for its intended use. In similar fashion, bandages, both adhesive and gauze, are typically provided in a "sterile" container that is ruptured, or torn open to obtain access to the bandage. Today, literally everything from soup to nuts is often provided to the ultimate user in what may be described as  
15 a rupturable package. Dry soup mixes are provided in envelopes that are torn open, and nuts and bolts are frequently sold in plastic pouches.

Even some medications are provided to the ultimate user in packaging that is sometimes referred to as a bubble pack or bubble card wherein one surface is typically formed from a foil-type material through which the medication is "punched"  
20 to rupture the foil and provide the medication to the user. Even toothpicks are often packaged in a tearable, paper container. Yet another example of what might be

termed as a rupturable package is a sealed plastic film envelope containing a drinking straw that one frequently finds attached to the outside of a single serving beverage.

However, with all such packages known to this inventor, one obtains access to the item contained therein either by tearing the package, cutting the package, or  
5 opening a zipper-type closure formed on the package. While such packages are quite suitable for their intended use, there remains a need for a rupturable package that could simply be opened by squeezing the package between one's thumb and fingers to "pop" the package open and thereby obtain access to the item placed inside. Of ancillary value, though nevertheless significant, is the fact that such a package would  
10 typically make a popping sound upon its being opened, and this sound could be of amusement to the user. On a more serious vein, such a package would have the further advantages of not requiring any external implement such as, for example, scissors, for opening, could be opened with one hand, and would not result in the creation of a small package fragment which is often times discarded as litter. These  
15 and other objects of the present of the invention will in part be obvious and will in part appear hereinafter.

## SUMMARY OF THE INVENTION

The present invention relates to a to a rupturable bubble package for containing an implement wherein the package comprises an enclosure formed from a substantially impervious, flexible material. The enclosure comprises a front panel, a back panel, and opposed top and bottom panels which are disposed in interconnecting relation between the front and back panels to define the enclosure. It is, of course, to be understood that the terms front, back, top and bottom are relative to the orientation of the package, and are not to be taken as absolute terms with respect to the embodiments described in greater detail hereinafter. It is also to be understood that the phrase "substantially impervious" is intended to convey that the material from which the enclosure is formed does not readily permit fluid inside the sealed package to pass therethrough. In its preferred embodiments, the fluid is typically a gas, though it is intended that liquids would fall within the scope of this invention. More particularly, when sealed, the package of this invention is capable of maintaining a positive pressure inside the package, when squeezed, so that the package will rupture as described below.

Rupturing of the package of this invention is accomplished by its construction to further comprise a weakened portion formed on at least one of the front, back, top and bottom panels. Therefore, squeezing the sealed enclosure will cause the weakened portion to rupture, providing access to the implement contained therein.

The invention accordingly comprises an article of manufacture possessing the features, properties, and the relation of elements which will be exemplified in the

claims.

### BRIEF DESCRIPTION OF THE DRAWINGS

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

5           FIGURE 1 is a perspective view of a prior art container for a drinking straw, showing the container and its straw attached to a drink carton, with the carton shown in phantom.

FIGURE 2 is a perspective view illustrating a first embodiment of the rupturable bubble package of this invention, containing a drinking straw, attached to a drink  
10           carton, with that carton shown in phantom.

FIGURE 3 is a front elevational view of the embodiment shown in Fig. 2.

FIGURE 4 is a right side elevational view of the embodiment shown in Fig. 2.

FIGURE 5 is an illustration of the embodiment shown in Fig. 2 being removed by the hands of a user, with the hands shown in phantom.

15           FIGURE 6 illustrates one hand of a user, shown in phantom, squeezing the package after removal, as depicted in the view of Fig. 5.

FIGURE 7 is a depiction of the package of Fig. 6 “popping” open.

FIGURE 8 depicts removal of the straw from the opened package of Fig. 7.

FIGURE 9 is a front elevation of a second embodiment of the package of this  
20           invention.

FIGURE 10 is a right side elevation of the embodiment shown in Fig. 9.

FIGURE 11 is a front elevation of a third embodiment of the package of this

invention.

FIGURE 12 is a right side elevation of the embodiment shown in Fig. 11.

FIGURE 13 is a front elevation of a fourth embodiment of the package of this invention.

5        FIGURE 14 is a right side elevation of the embodiment shown in Fig. 13.

FIGURE 15 is a front elevation of a fifth embodiment of the package of this invention.

FIGURE 16 is a right side elevation of the embodiment of Fig. 15.

10       FIGURE 17 is a front elevation of a sixth embodiment of the package of this invention.

FIGURE 18 is a right side elevation of the embodiment shown in Fig. 17.

FIGURE 19 is a front elevation of a seventh embodiment of the package of this invention.

FIGURE 20 is a right side elevation of the embodiment shown in Fig. 19.

15       FIGURE 21 is a front elevation of the first embodiment of this invention, as shown in Fig. 3, illustrating a different implement contained within the package.

FIGURE 22 is a right side elevation of the embodiment of Fig. 21.

Similar reference characters refer to similar parts throughout the several views of the drawings.

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## DETAILED DESCRIPTION

In the view of Fig. 1, an example of a state-of-the-art container, generally indicated as 30, and having a drinking straw 32 contained therein is shown as being

attached to one side of a single serving drink container 34. To use the straw 32, one would remove container 30 from drink container 34 and open container 30 as by tearing or cutting. Then, straw 32 could be removed and inserted through aperture 36 of the drink container.

5           The view of Fig. 2 illustrates the rupturable bubble package of the present invention, generally indicated as 38. While package 38 is illustrated as being formed from a substantially clear, or transparent, material, it is to be understood that this is for illustrative purposes only, and is not a limitation on the scope of the present invention. Rupturable package 38 is illustrated as being attached to a side 40 of a drink container  
10   34, also including an aperture 36 for insertion of straw 32, once straw 32 has been removed from bubble package 38.

Bubble package 38 comprises an enclosure that is preferably formed from a flexible material, and the enclosure is defined by a front panel 42, a back panel 44, a top panel 46, and a bottom panel 48. As will be described in greater detail below,  
15   package 38 is preferably attached to side 40 by a peelable adhesive between back panel 44 and side 40. In the embodiment of Fig. 2, a weakened portion extends across front panel 42, and weakened portion in this embodiment comprises a score line 50 in the material from which bubble package 38 is formed. Also visible in the view of Fig. 2 is a hinge line 52, as more fully described below. The views of Figs. 3 and 4  
20   depict the embodiment of Fig. 2 in front elevation and right side elevation, respectively.

Turning to the views of Figs. 5 - 8, left hand 54 and right hand 56 of a user are

shown in phantom. In the view of Fig. 5, one of the fingers of left hand 54 is being used to peel bubble package 38 away from drink container 34, while drink container 34 is held by right hand 56. In the view of Fig. 6, right hand 56 is squeezing the bubble package 38. Because the bubble package 38 is formed from a flexible, substantially impervious material that is capable of maintaining a positive pressure when package 38 is squeezed, the internal pressure will cause score line 50 to rupture as illustrated in the view of Fig. 7, the rupture being depicted by radial dashed lines 58. This causes an upper segment 60 of front panel 42 to spring upwardly, providing access to straw 32 inside package 38. For further ease in removing straw 32, the portion of bubble package 38 above hinge line 52 may actually be folded back. Upon squeezing rupturable bubble package 38, as depicted in the view of Fig. 6, one may actually experience an audible "pop" as the package 38 ruptures at score line 50. As used herein the phrase "score line" is used to designate a weakened segment, for example a partial cut, through front panel 42. Score line 50 does not inhibit the integrity of sealed package 38, but does provide a weakened portion for rupturing package 38 by the application of pressure.

The views of Figs. 9 and 10 depict a second embodiment for rupturable bubble package 38 wherein the weakened portion comprising score line 50' is positioned substantially across the midpoint of front panel 42. Of course, in the views of Figs. 9 and 10, as well as the remaining views provided, bubble package 38 is illustrated without any attached container or other substrate. It is to be understood that package 38 of this invention may be attached to virtually any desirable container or substrate.

However, as previously indicated and described, the attachment would preferably be made by means of a peelable adhesive.

While score line 50' is illustrated as being oriented horizontally across front panel 42, it is to be appreciated that score line 50' could also be oriented vertically, and the application of pressure would still cause package 38 to rupture, providing access to straw 32.

Turning to the views of Figs. 11 and 12, one can see that score line 50' has been moved to a position on front panel 42 that is substantially adjacent top panel 46. It is again to be appreciated that score line 50' could just as easily be positioned substantially adjacent bottom panel 48.

The embodiment shown in the views of Figs. 13 and 14 illustrates the weakened portion as score line 50". As shown in the view of Fig. 13, score line 50" extends only partially across front panel 42. Nevertheless, upon the application of pressure, score line 50" will rupture, most probably with a "pop" sound, providing access to straw 32.

Turning to the views of Figs. 15 and 16, top panel 46 comprises a lip segment 60 that extends onto front panel 42, and the attachment of lip segment 60 to front panel 42 defines a weakened segment whereby this embodiment of bubble package 38 may be opened by the application of pressure, as described above. In effect, then, lip segment 60 in combination with top panel 46 may be said to define a releaseable cap that will rupture or break away when package 38 is squeezed.

In the embodiment of Figs. 17 and 18, the weakened portion is defined by a

substantially V-shaped score line 62. The application of pressure to this embodiment of package 38 will cause each side of V-shaped score line 62 to rupture, thereby providing access to drinking straw 32.

Turning to the embodiment of Figs. 19 and 20, top panel 46 is integral with front panel 42 and is interconnected to back panel 44 to define a seam 64. In this embodiment for bubble package 38, seam 64 defines the weakened portion whereby application of pressure to bubble package 38 will rupture seam 64 to provide access to straw 32.

Finally, the views of Figs. 21 and 22 depict a rupturable bubble package 38 that is substantially identical to the embodiment of Figs. 1 - 6. However, for purposes of clarity in showing that virtually any implement may be placed within bubble package 38, the views of Figs. 21 and 22 illustrate a toothpick 66 within the enclosure of package 38.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained, and, since certain changes may be made in the above article without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall there

between.

Now that the invention has been described,

What Is Claimed Is:

1. A rupturable bubble package for containing an implement, said package comprising an enclosure formed from a flexible material, said enclosure comprising a front panel, a back panel, and opposed top and bottom panels, said opposed top and bottom panels being disposed in interconnecting relation between said front and back panels to define said enclosure; said flexible material being substantially impervious, whereby a positive pressure may be maintained within said enclosure when an implement is placed therein and said front panel, said back panel, and said top and bottom panels are sealed; said enclosure further comprising a weakened portion formed on at least one of said front, back, top and bottom panels, such that squeezing said sealed enclosure will cause said weakened portion to rupture, permitting access to the implement.
2. A rupturable bubble package as in claim 1 wherein said weakened portion is formed on said front panel intermediate said top panel and said bottom panel.
3. A rupturable bubble package as in claim 1 wherein said weakened portion is formed on said front panel and said top panel.
4. A rupturable bubble package as in claim 1 wherein said top panel is integral with said front panel and is interconnected to said back panel to define a seam.

5. A rupturable bubble package as in claim 4 wherein said weakened portion is defined by said seam.

6. A rupturable bubble package as in claim 1 wherein said top panel comprises a lip segment that extends onto said front panel, said lip segment being attached to said front panel and said weakened portion being defined by said attachment of said lip segment to said front panel.

7. A rupturable bubble package as in claim 1 wherein said weakened portion comprises a score line.

8. A rupturable bubble package as in claim 7 wherein said score line is disposed on said front panel intermediate said top panel and said bottom panel.

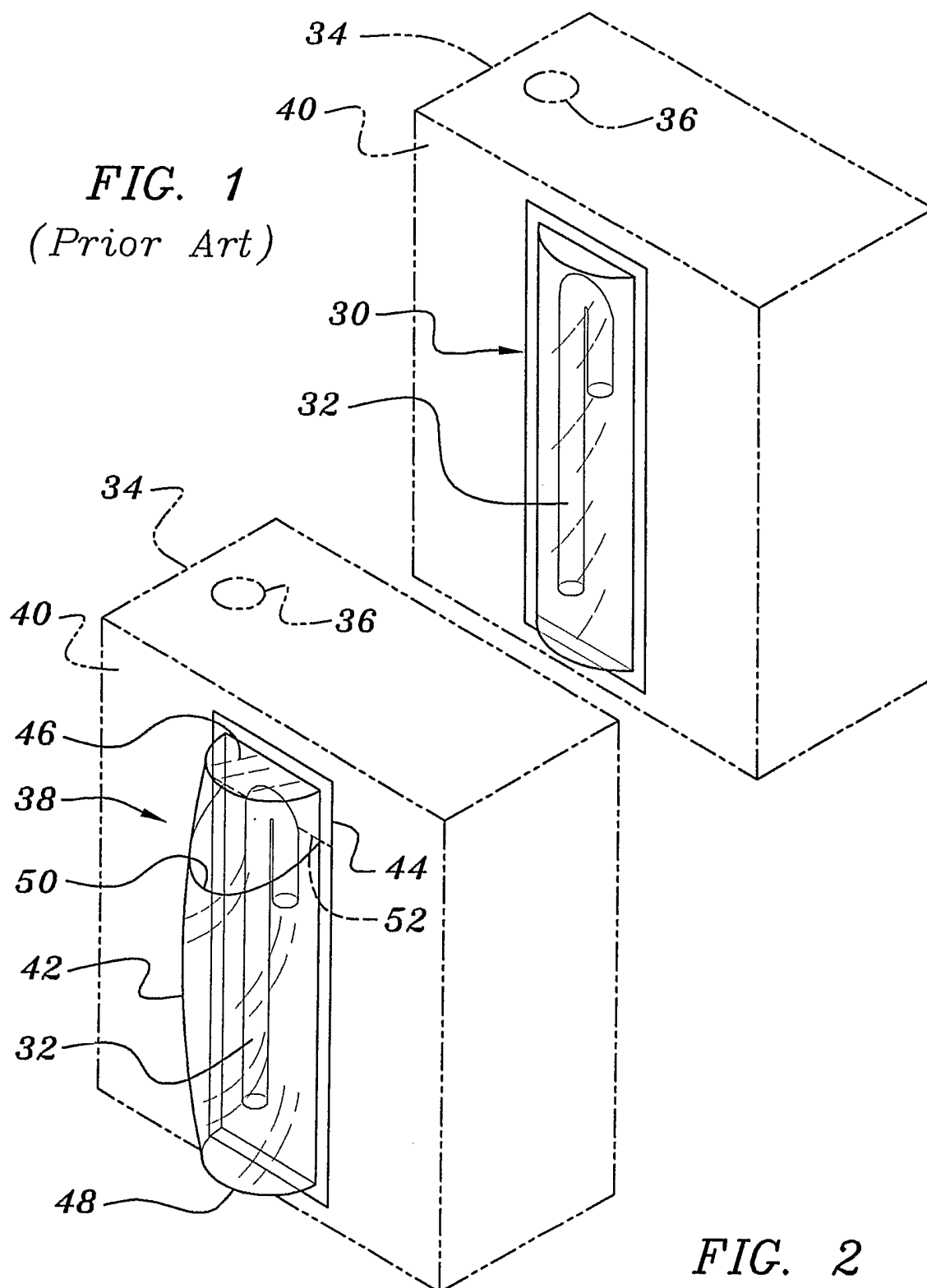
9. A rupturable bubble package as in claim 7 wherein said score line is substantially V-shaped with the open end thereof extending toward said top panel.

10. A rupturable bubble package as in claim 1 further comprising a carrier substrate, said enclosure being attached to said carrier substrate along said back panel.

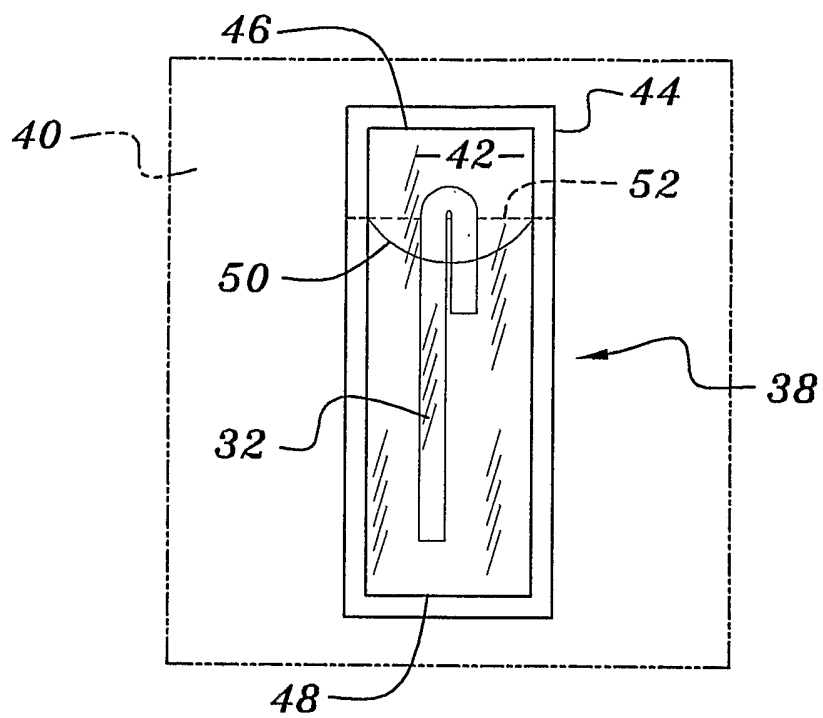
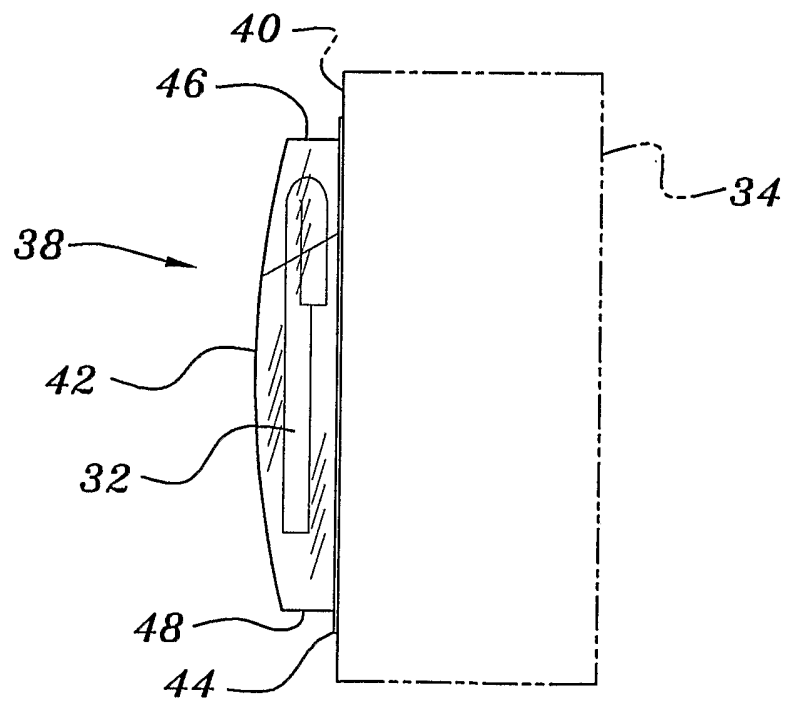
11. A rupturable bubble package as in claim 10 wherein said attachment of said back panel to said carrier substrate comprises a peelable adhesive, whereby said enclosure may be removed from said carrier substrate.

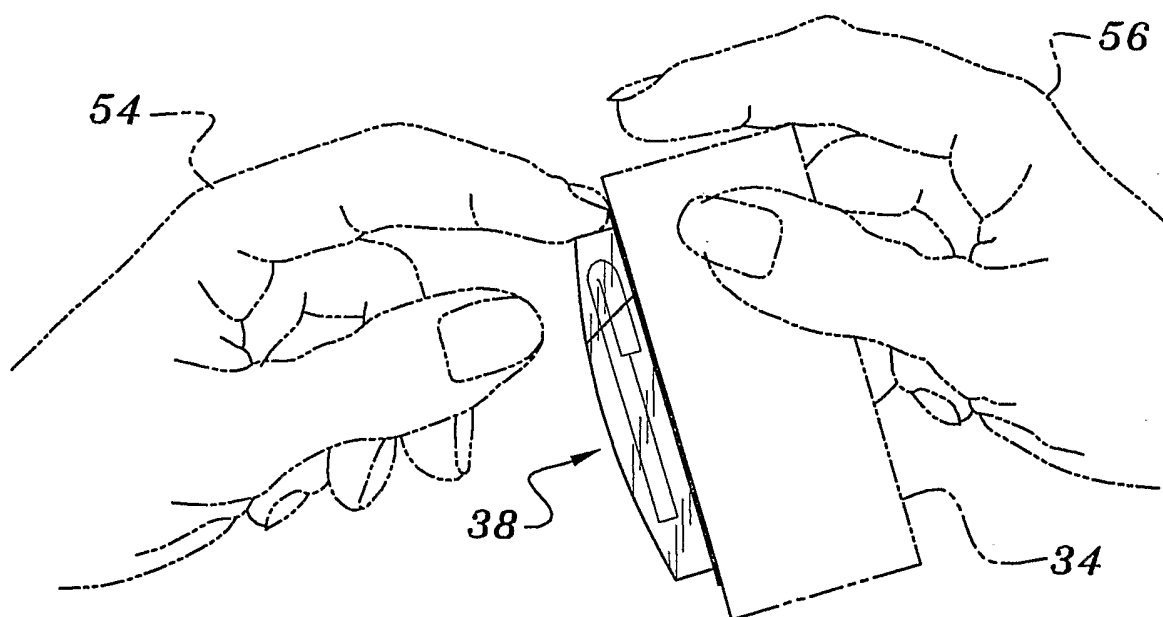
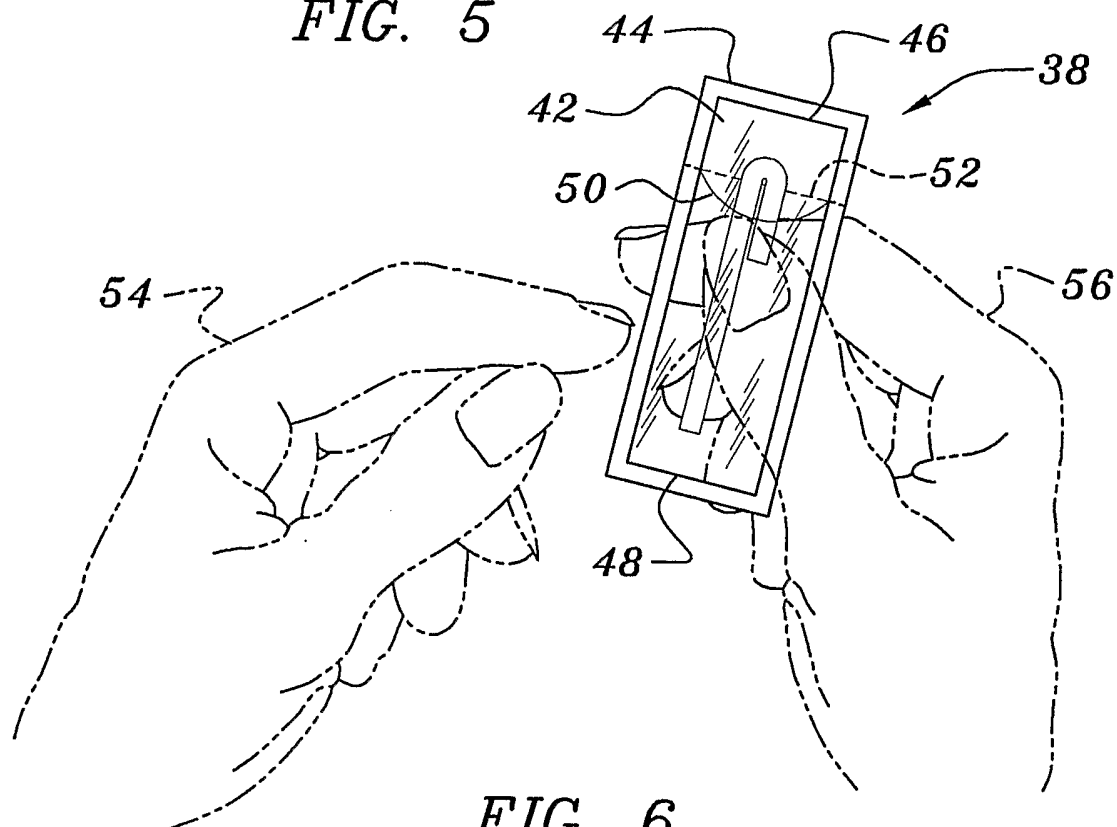
12. A rupturable bubble package as in claim 1 wherein said weakened portion comprises a seam between said front panel and said top panel.

*FIG. 1*  
(Prior Art)



*FIG. 2*

*FIG. 3**FIG. 4*

*FIG. 5**FIG. 6*

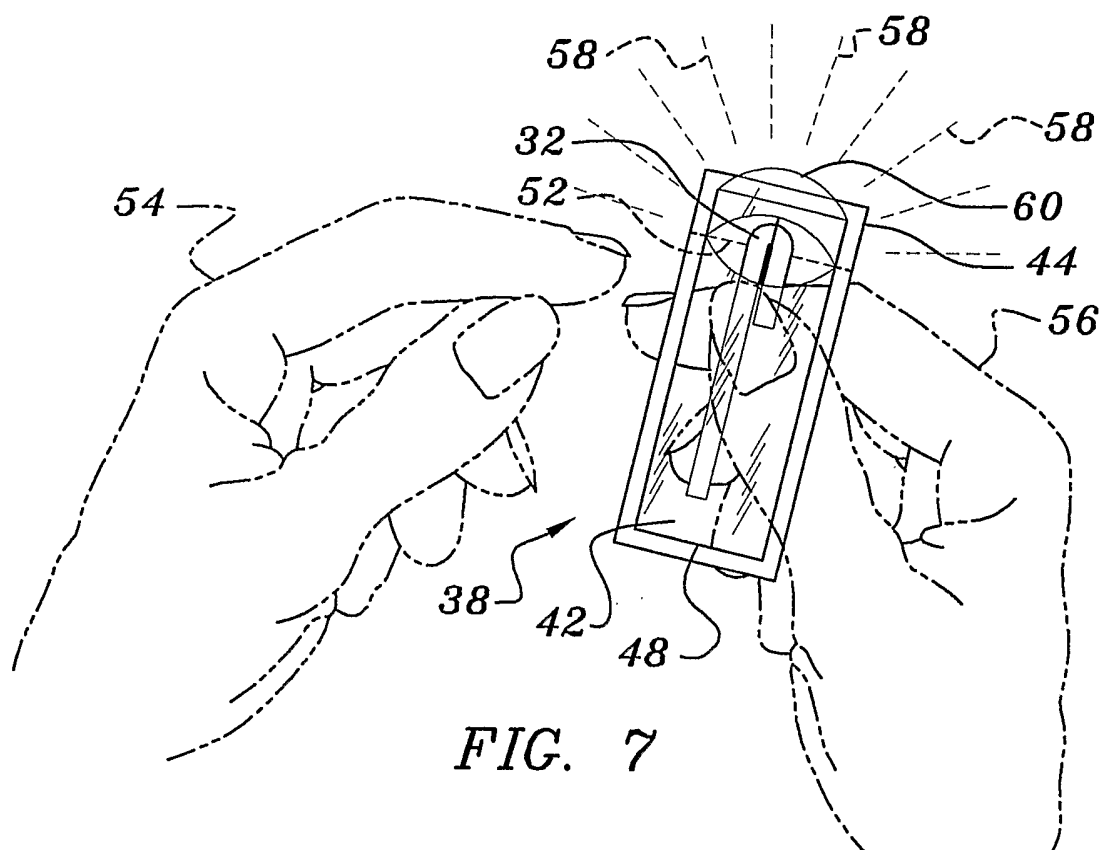


FIG. 7

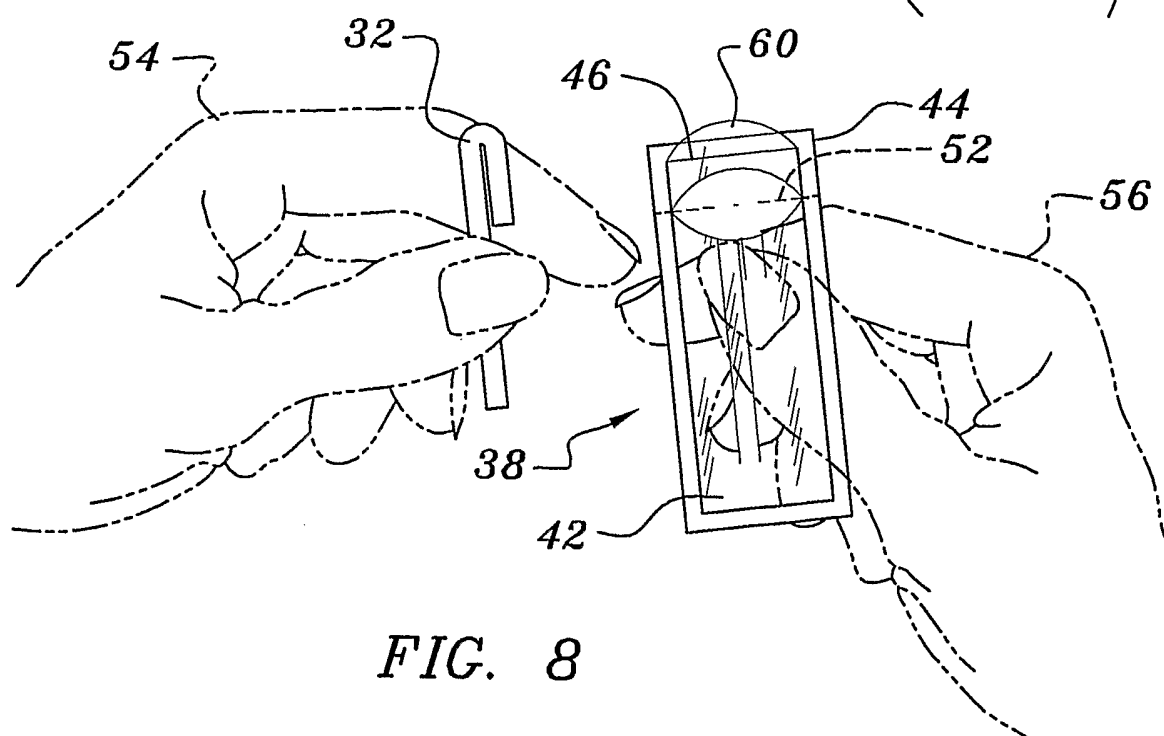


FIG. 8

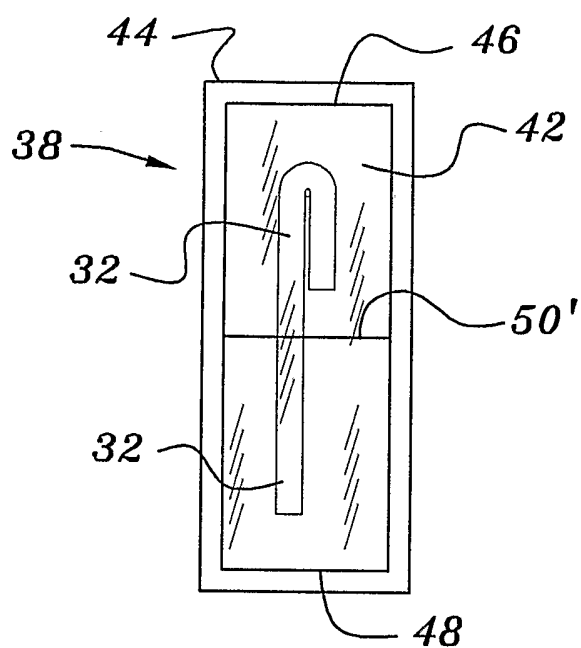


FIG. 9

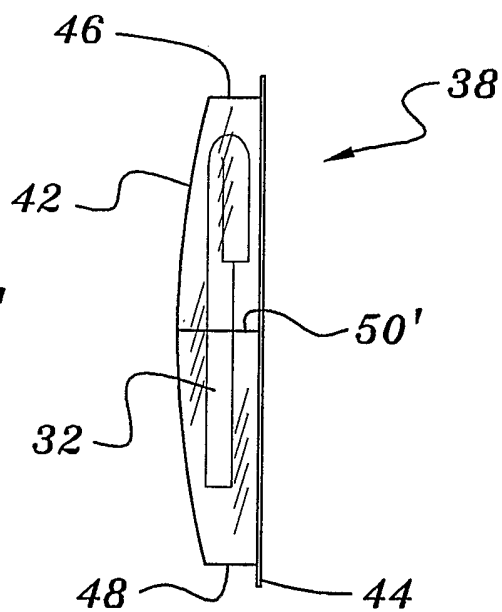


FIG. 10

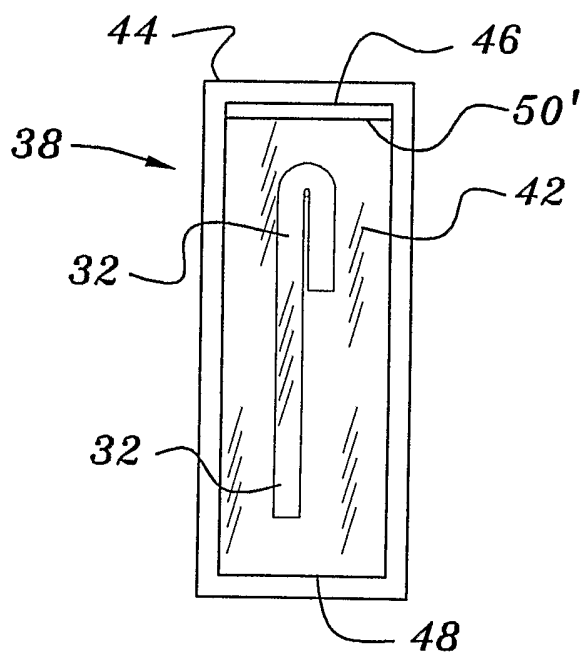


FIG. 11

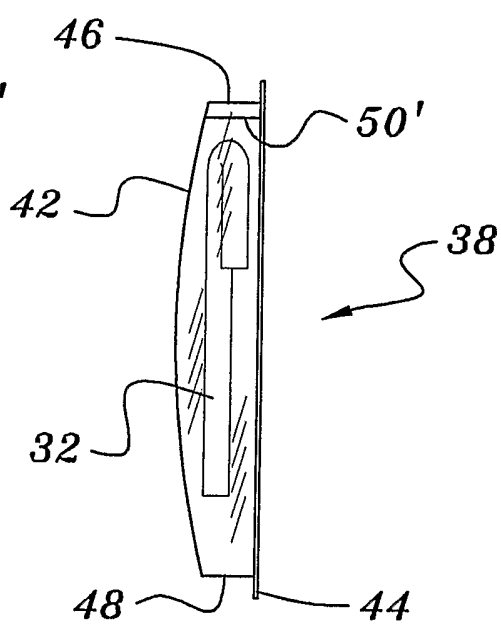


FIG. 12

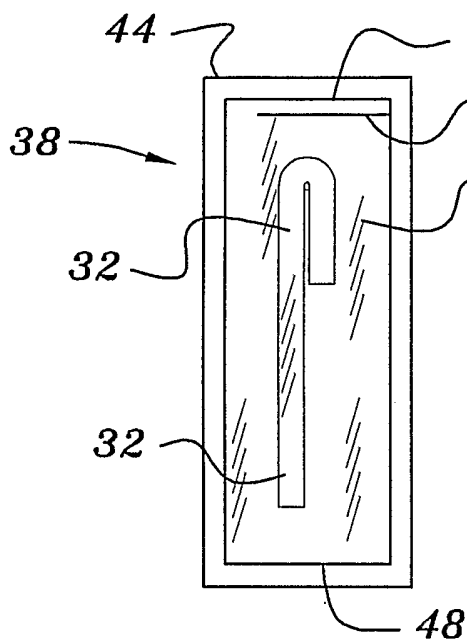


FIG. 13

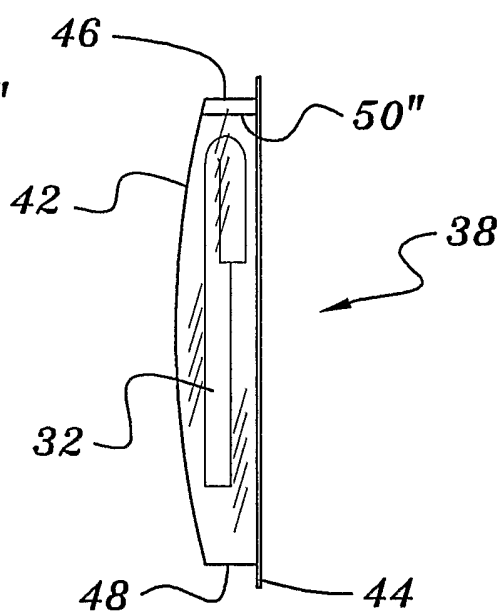


FIG. 14

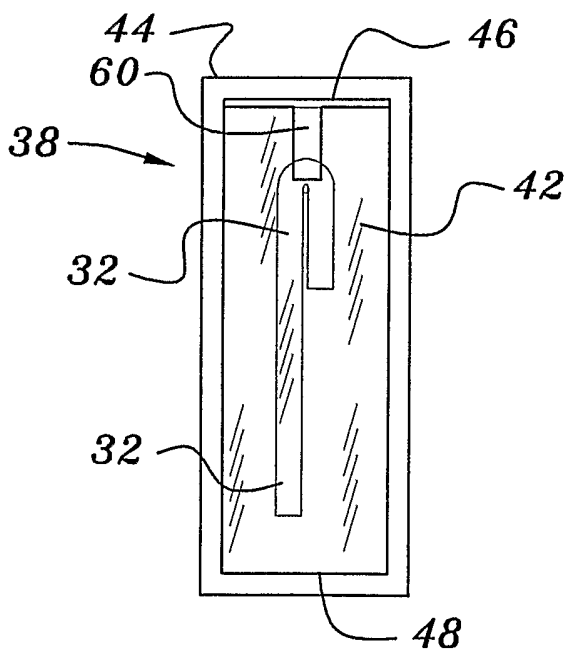


FIG. 15

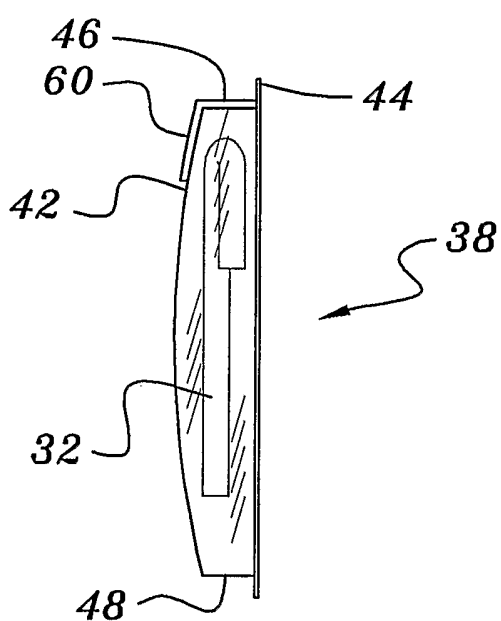
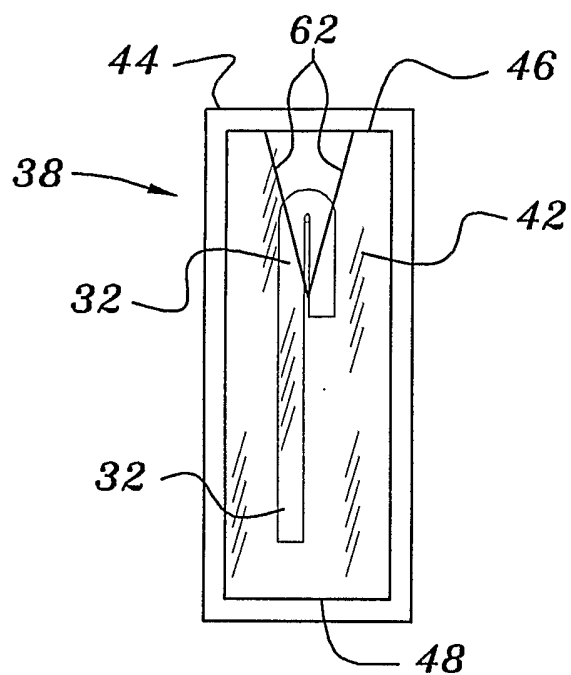
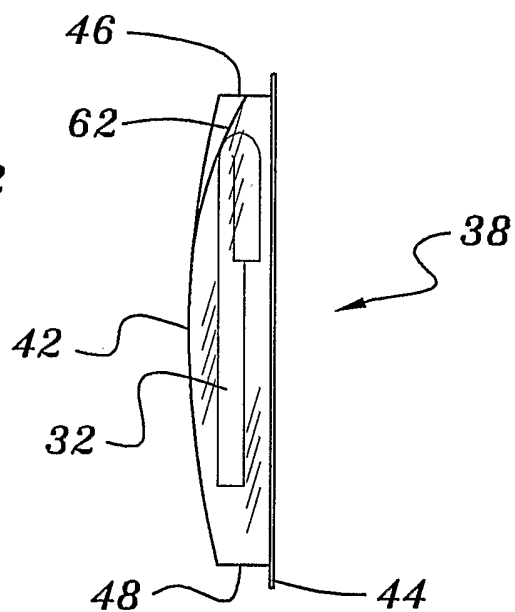
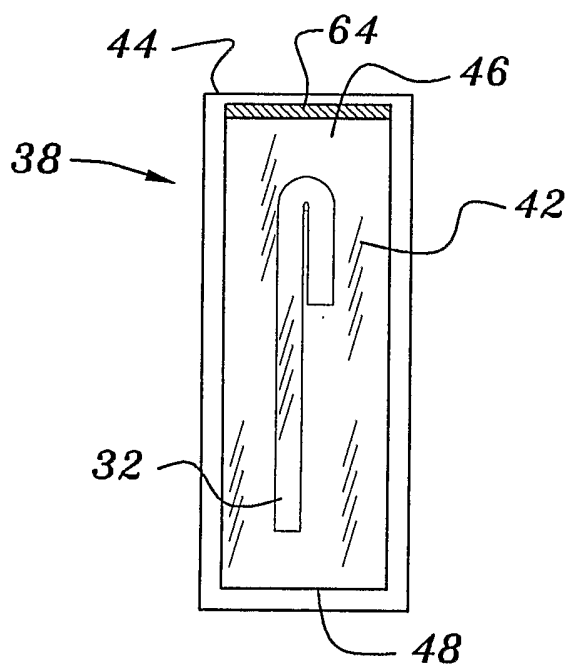
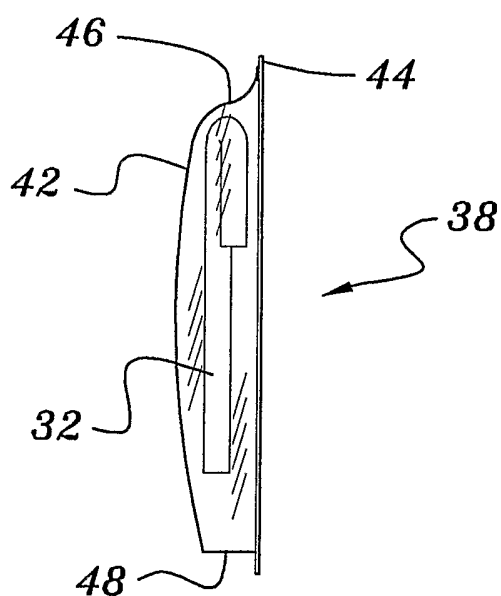
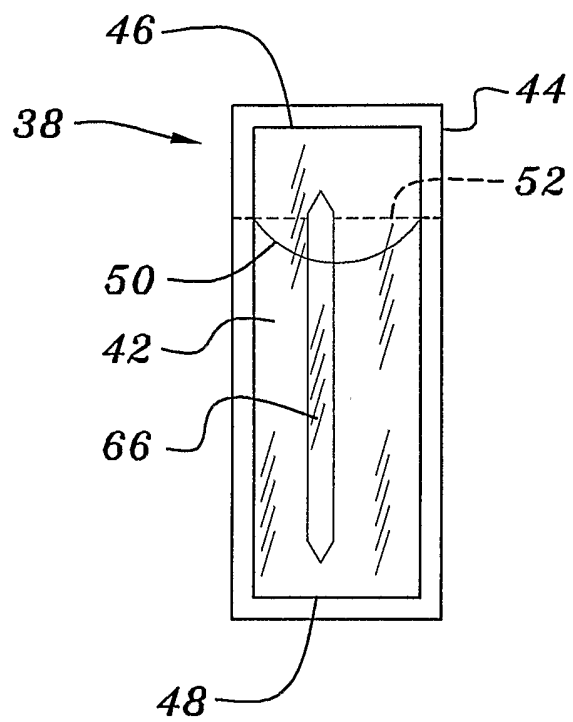
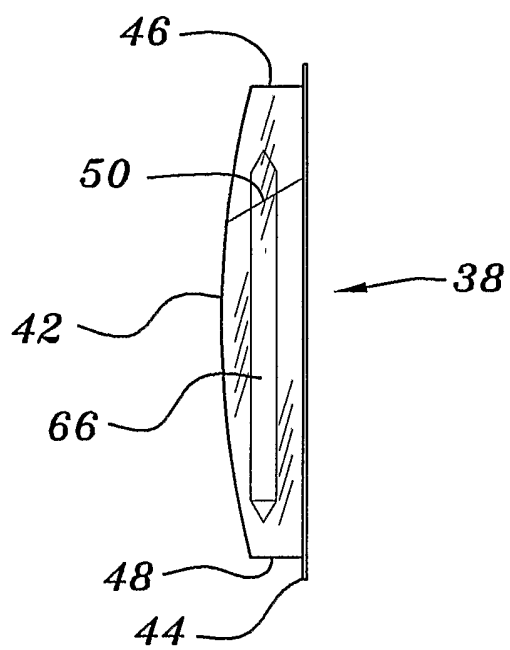


FIG. 16

*FIG. 17**FIG. 18**FIG. 19**FIG. 20*

*FIG. 21**FIG. 22*