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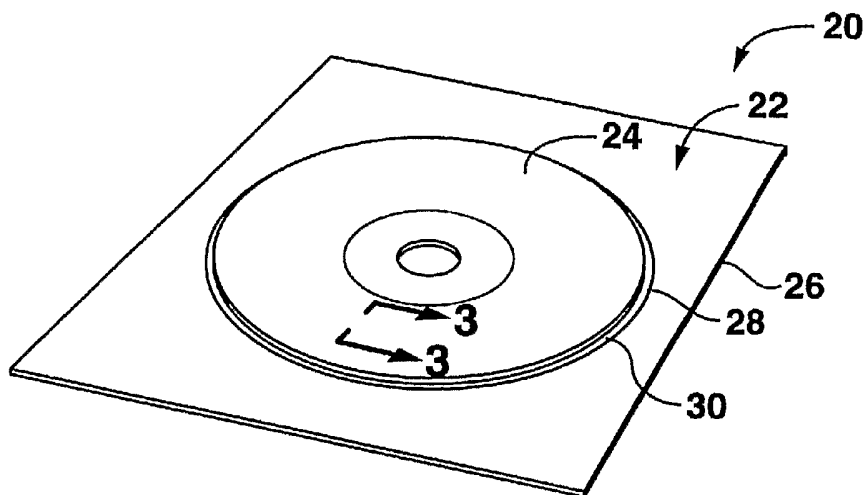
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(54) Title: PRODUCT HOLDER AND PACKAGED PRODUCT INCORPORATING CLING POLYMER



(57) Abstract: A holder for a product is disclosed, the holder including a substrate separate from the product and a cling polymer layer attached to at least a portion of the substrate. The cling polymer layer has an outer surface defining a target area configured for releasably securing the product to the substrate, whereby the product may be repeatedly placed on the target area to secure the product to the substrate for handling as a unit. Related packages including one or more of such product are also disclosed. Adhesives may be utilized as well, as a supplement to the cling polymer, to provide additional securing force to hold the product to the substrate.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

TITLE OF INVENTION

Product Holder and Packaged Product Incorporating Cling Polymer

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RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Patent Application Serial No. 60/668,813, filed April 6, 2005, U.S. Provisional Patent Application Serial No. 60/732,445, filed November 1, 2005, and PCT International Application No. PCT/US05/30204, filed August 25, 2005, all of which are incorporated by reference herein.

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FIELD OF INVENTION

The present invention relates generally to holders for products, and to packages including holders and products, wherein the holder incorporates a cling polymer to hold the product in place.

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BACKGROUND OF INVENTION

Data storage media, such as CDs, CD-ROMs, and DVDs, require careful handling and protection. Typically, such media is in the form of polycarbonate discs, with one recorded side and one printed side. Some data storage media have two recorded sides. Scratches or other damage to the recorded sides can render such media unreadable. Also, damage that extends through protective coatings, printed matter, and the like on non-recorded sides or even the disc edges can also render such media unreadable.

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Various types of protective devices for such data storage media have been proposed. For example, "jewel boxes," cardboard sleeves, and the like have been used to package and protect data storage media. CD jewel boxes typically have two parts pivotally connected (a base and a lid), with a flexible, round hub with multiple arms provided on the inside of the base. A circular opening through the center of a disc can be pushed onto the flexible hub to hold the disc in place. Other similar structures have been incorporated into cardboard packaging for CDs, and DVDs have also been packaged using similar structures.

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While these devices are somewhat effective for many purposes such as retail sales, the devices suffer from certain drawbacks.

For example, such devices are relatively bulky and expensive. In particular, such devices may not be suitable for various promotional, distributional, or storage uses. Thus, it may not be practical to distribute promotional CD's via mail or within mailed magazines using such conventional devices. Further, storage of many discs in one location can require a much larger amount of space than is called for simply by the discs themselves. Also, such devices may not provide a secure protection and/or covering of the recorded sides of such media. Moreover, such devices are easily damaged or destroyed in use, rendering impossible their repeated use to hold or store data storage media. Accordingly, one or more new data storage media holders and packages incorporating such media, addressing one or more drawbacks of conventional devices such as those listed above or others, would be welcome.

Products other than data storage media are packaged in diverse ways, depending for example on the characteristics of the product, its use, its life cycle, how it is sold or marketed, etc. The packaging may be used for promotional, sale, carrying or protective purposes. The packaging industry is generally interested in packaging simplifications and improvements, for example to save money, reduce waste, and/or provide a re-usable package. Products held in place within their packaging by fugitive glue, may retain the glue upon removal of the product from the package. This fugitive glue or residue is unsightly, must be manually removed, and is an annoyance to many consumers. The sheer novelty of a product's adherence to a substrate without being tied or glued, somehow being "magically" stuck to a clean non-sticky surface, also has an entertaining aspect to it, which is a quality sought by marketers. Accordingly, improved packaging for products and packaged product configurations would be welcome in the broad scope of goods beyond storage media as well.

SUMMARY

According to certain aspects of the invention, a holder is disclosed for a product, the holder including a substrate separate from the product, and a cling polymer layer attached to at least a portion of the substrate, the cling polymer layer having an outer surface defining a target area configured for releasably securing the product to the substrate,

whereby the product may be repeatedly placed on the target area to secure the product to the substrate for handling as a unit. Various options and modifications are possible.

For example, the cling polymer layer may be configured for securing a product including one of glass, plastics, metals, ceramics and other non-porous, smooth materials.

5 Also, the target area may be as large as the surface area of the product, and/or it may be continuous or segmented. The substrate may include one of a natural material product, a paper product, a polymer product, a synthetic product, or combinations thereof.

10 An adhesive may be disposed on at least a portion of the cling polymer layer for contacting the product to assist in releasably securing the product. The substrate may include at least two surfaces, and the holder may include two cling polymer layers, each cling polymer layer being disposed on one of the surfaces. The cling polymer layer may include a vinyl or a polyester. The cling polymer layer may also include a plasticizer.

The cling polymer layer may be at least partially translucent or transparent, whereby the substrate is at least partially visible through the cling polymer layer.

15 Also, the substrate may include graphical material, the product being releasably securable atop the graphical material via the cling polymer, whereby removal of the product reveals the graphical material. Also, the product and the substrate may include graphical material configured to co-operatively form a single presentation when the product is attached to the target area in a predetermined orientation.

20 The product holder may include a plurality of the target areas for releasably securing a plurality of the products. Also, the cling polymer layer may include a plurality of pieces spaced from each other, each of the target areas being formed from one of the pieces of the cling polymer layer. The pieces may be disposed laterally with respect to one another on the substrate, and/or the product holder may include a plurality of the substrates, 25 each of the pieces of the cling polymer layer being disposed on a respective one of the plurality of the substrates.

If desired only the cling polymer layer secures the product to the substrate. Alternatively, only the cling polymer layer and an adhesive secure the product to the substrate.

30 The cling polymer layer may be permanently or removably attached to the substrate, or plurality of substrates. For example, in an instance wherein the cling polymer layer is permanently attached to a substrate (in essence, creating a "holder"), this "holder"

(the cling polymer/substrate construction) may be removably attached to another substrate. The holder may further include one of a two-ply dry-release construction, a cohesive film construction, a plurality of cling polymers adhering one to the other, a fugitive adhesive, or low tack adhesive for facilitating the removable attachment. The cling polymer layer
5 alone, or the cling polymer layer/substrate construction, may be removably attachable and reattachable to the substrate. Furthermore, the cling polymer layer may be attached to the substrate using adhesive as a bonding agent between the cling polymer layer and the substrate. Alternatively, the cling polymer layer may be joined to the substrate via casting, coating or compression.

10 The substrate may define a wall or three-dimensional shape, configured for receiving the product. The target area may be surrounded by the wall or three-dimensional shape, and/or the target area may be disposed on the wall or three-dimensional shape. Also, the cling polymer layer may be non-planar, whether pre-formed or so formed during application of the product thereto.

15 The product material and the cling polymer layer material may separate in a 180 degree peel force test at about 50 to about 200 grams. The substrate may comprise one or more of an envelope, a folder, a binder, a flat member having an overlay, a pocketed member, a slit member, or a box.

According to other aspects of the invention, a holder is disclosed for a product
20 having a first surface, the holder including a base separate from the product, and means disposed on the base for contacting the product via the first surface to thereby releasably secure the product to the base, whereby the product may be repeatedly secured to the base for handling as a unit, the means for contacting including a cling polymer layer. Again, various options and modifications are possible.

25 For example, the cling polymer layer may be disposed on at least a portion of the base. The cling polymer layer is permanently or removably attached to the base, or removably attachable and reattachable to the base. The means for contacting may include an adhesive disposed on at least a portion of the base. The means for contacting may include a substantially planar contact surface for contacting the first surface of the product
30 and securing the product to the base, or in the case of products which do not have substantially planar surfaces, the contact surface may be solidly or compressibly molded or otherwise formed to receive the product and make contact with it. The product material

and the base material may separate in a 180 degree peel force test at about 50 to about 200 grams. The base may include at least two surfaces, the means for contacting being disposed on the surfaces.

5 The invention further includes various configurations of packages. Accordingly, the invention includes a package including a holder as above and at least one of the product attached to the holder via the cling polymer. Also, the product may be one of glass, plastics, metals, ceramics, non-porous, smooth materials and other materials such as may be retained by cling polymers.

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BRIEF DESCRIPTION OF THE DRAWINGS

The above and other aspects and advantages of the present invention are apparent from the detailed description below and in combination with the drawings in which:

Fig. 1 is a perspective view of a first embodiment of a holder and package for a data storage medium according to certain aspects of the present invention.

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Fig. 2 is a perspective view of the holder of Fig. 1, with the data storage medium removed from the holder.

Fig. 3 is a cross-sectional view of a portion of the package of Fig. 1 taken along line 3-3, showing one possible combination of features.

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Fig. 4 is a top view of the holder of Fig. 1 showing one possible orientation of a target area on a substrate.

Fig. 5 is a top view of an alternate holder, showing an alternate continuous target area.

Fig. 6 is a top view of an alternate holder, showing an alternate segmented target area.

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Fig. 7 is a top view of an alternate holder, showing a plurality of target areas on a single substrate.

Fig. 8 is a perspective view of an alternate holder, showing a plurality of target areas on a plurality of substrates.

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Fig. 9 is a top view of an alternate holder, showing a single graphical presentation across a data storage medium and a substrate and/or polymer layer.

Fig. 10 is a perspective view of an alternate holder, showing a cling polymer layer releasably attachable to a substrate and an optional tab and recess structure for assisting in removal.

Fig. 11 is a cross-sectional view of a portion of an alternate holder, showing an additional layer contacting the second side of the data storage medium.

Fig. 12 is a cross-sectional view of an alternate holder, showing a wall formed in the substrate for surrounding an edge of the data storage medium.

Fig. 13 is an enlarged cross-sectional view of a portion of a modified version of the holder of Fig. 12.

Fig. 14 is a cross-sectional diagrammatical view of a substrate, a cling layer, and a product according to broad aspects of the invention.

Fig. 15 is a perspective view of a first example of one application of the concepts of Fig. 14, wherein a product comprising a portable music player is attached to a holder.

Fig. 16 is a cross-sectional view of an example of a holder and product wherein the cling polymer layer is pre-formed to be non-planar.

Fig. 17 is a cross-sectional view of an example of a holder and product wherein the cling-polymer layer is non-planar, as formed via contact with the product, shown before contact.

Fig. 18 is a cross-sectional view of an example of the holder and product of Fig. 17, shown after contact.

DETAILED DESCRIPTION

Detailed reference will now be made to the drawings in which examples embodying the present invention are shown. The drawings and detailed description provide a full and detailed written description of the invention, and of the manner and process of making and using it, so as to enable one skilled in the pertinent art to make and use it, as well as the best mode of carrying out the invention. However, the examples set forth in the drawings and detailed description are provided by way of explanation of the invention and not meant as a limitation of the invention. The present invention thus includes any modifications and variations of the following examples as come within the scope of the appended claims and their equivalents.

The detailed description uses numerical and letter designations to refer to features in the drawings. Like or similar designations in the drawings and description have been used to refer to like or similar parts of the invention.

As broadly embodied in Figs.1-4, one example is disclosed of a package and holder
5 for a data storage medium according to certain aspects of the present invention. As shown therein, package 20 includes holder 22 and data storage medium 24.

It should be understood that data storage medium 24 may be any known or future type of data storage device, such as optical, magnetic, flash memory or other types of storage devices. The types of data to be stored are also unlimited within the scope of the
10 inventive concepts.

For example, data storage media could be conventional discs that either hold content (i.e.: sounds, images and/or data as distributed on various compact disc (CD) and DVD variations) or are recordable (e.g.: CD-Rs and DVD-Rs). Such discs are typically manufactured using polycarbonate, and include (but are not limited to) forms of optical
15 discs in varying sizes such as 80 mm or 120 mm, and which may be round or any other regular or irregular shape. The present invention is thus not limited to packaging for any type, size, shape, or form of media and/or disc, manufactured using any material, including those not yet invented, and here hereafter collectively referred to as "data storage medium," "data storage media," "disc media," "media disc," or simply "disc."

20 Similarly, holder 22 may be any type of substance suitable for supporting the associated data storage medium, for the particular application. Thus, holder 22 may take many disparate forms according to the scope of the various inventive concepts.

For example, holder 22 may incorporate a substrate 26 and a polymer layer 28, in some applications, and a target area 30 for placement of data storage medium 24. It should
25 be understood that substrate 26 may have various sizes and shapes, from those tightly conforming to the outer shape of data storage medium 24 to those larger in various ways. Substrate 26 may incorporate a single continuous polymer layer 28 for a single data storage medium, or may incorporate multiple polymer layers, either for multiple data storage media or in a segmented orientation for a single data storage medium, as will be described below.

30 Thus, substrate 26 may be made of any suitable manmade or natural material(s), such as paper, plastic, cardboard, magazine stock, card stock, or combinations thereof, whether having a clear, opaque, glossy, matte, or printed finish. Substrate 26 may also be

flat, folded, textured, molded in shape, or it may be an envelope, binder, cover, pocketed member, slit member, or inner or exterior surface of a box, or the like. In one aspect of the present invention, substrate 26 may be shaped coordinately with the data storage medium which it receives, for instance in the case of a standard 120 mm CD or DVD, circular in shape, at 120 mm or greater in diameter. Alternately, substrate 26 may be square or rectangular, with side 120 mm or greater. Holder 22 of Figs. 1-4 shows such a square example for substrate 26.

Polymer layer 28 may have various forms. For example, in one embodiment polymer layer 28 may be a "cling polymer," such as cling vinyl or cling polyester. Such materials are sometimes called "static cling polymers" or "static cling vinyl", although such term is perhaps a misnomer as static cling is not required.

If polymer layer 28 is in fact a cling polymer, such layer may be a cling vinyl formulated from polyvinyl chloride (PVC) and plasticizer (a liquid), such as those commercially available from vendors such as Ritrama, Inc., of Minneapolis, MN (Products no. 3-1550, 3-1321, or 3-1322, "Gloss clear static cling non-topcoated vinyl"); Plastiprint, Inc., of Lakewood, CO ("Static Cling Vinyl"); and Grafix® Plastics, Inc. of Cleveland, OH ("Static Cling Vinyl Film"). A suitable plasticizer for cling polymers is dioctyl phthalate or trioctyl trimellitates. Such plasticizers can provide or enhance the adhesion of the cling polymer. Cling vinyl has a smooth finish and adheres firmly to any clean, smooth, glossy surface such as glass, metals, and various plastics, including polycarbonate, and other surfaces. Cling polyesters are also suitable for polymer layer 28. Further, any other polymer substance or other substance that could be applied to or serve as a substrate, whereby releasable securement with the data storage media described herein could be used. Use of such cling material is advantageous as it does not leave adhesive or sticky residue on the disc, while at the same time being very pliable and bendable, facilitating easy removal. An important advantage is that the securing capability of cling polymers is not measurably reduced with repeated use. Therefore, the disc can be removed for use and replaced repeatedly. The disc may thus be protected between the times when it is being used: during the time it is shuffled on desks, tucked into pockets, briefcases, back-packs and handbags, stacked, filed, and otherwise handled.

As shown, polymer layer 28 is disposed as a film or layer on at least a portion of the surface of the substrate, such as the target area 30 for receipt of data storage medium 24.

Target area 30, whether formed continuously or in segments, covers an area large enough, in proportion to data storage medium 24, so that application of the medium to the target area results in the retention of the medium to the target area. Thus, target area 30 may be equal to or greater in size than a disc that it will receive, so as to provide coverage and protection to the entire media side of the disc, as shown in Figs 1-4. If desired, the polymer layer 28 may be disposed on the entire surface of substrate 26, whether the substrate is circular and sized to match a disc, or is smaller than or larger than the disc in some way. If desired, substrate 26 may have polymer layers 28 on opposite sides. Thus, the target area 30 may or may not be substantially commensurate in size with the substrate 26.

Alternatively, target area 30 may be comprised of segments or areas of polymer layer 28, the sum of which is sufficient to hold the disc in place.

Data storage medium 24 should be held on target area 30 firmly enough to stay in place but easily removable when desired. Thus, utilizing materials providing a 180 degree peel test value of about 50 to about 200 grams is believed to provide firm enough hold for most applications. More particularly, a peel test value of about 80 to about 188 grams may provide reliable performance, and a value of about 150 to about 180 grams may be suitable for other applications.

Any suitable adhesive (not shown) to attach polymer layer 28 to the substrate 26 may be used in the present invention. If desired, V402 adhesive available from FlexCON, Inc., of Spencer, MA, may be used to adhere a vinyl polymer layer to a substrate. This adhesive has a 180 degree peel test value of approximately 800 grams (within the range which is typical of the force associated with permanent adhesives). It is clear and plasticizer-resistant. If desired, the adhesive and polymer layer 28 may be formed translucent, to allow graphical material on substrate 26 to be displayed. Alternately, polymer layer 28 may it self include graphical material.

Optionally, a low tack adhesive may be disposed on at least a portion of the surface of substrate 26, thereby forming target area 30 for receipt of data storage medium 24. Target area 30 thus should have a capability to rapidly and reliably bond to the delicate "media side" of discs. This is true whether target area 30 comprises substrate and/or construction utilizing cling polymer, adhesive, or combination of cling polymer and adhesive. For successful bonding to polycarbonate discs (e.g., CDs) the tack or 'stickiness' of the polymer, adhesive, and/or combined polymer/adhesive surface is controlling. Tack,

or the ability to form a bond to a surface after brief contact under light pressure, can depend on many different factors, including dwell time and age of materials (especially as affected by plasticizer migration). Therefore bonding and debonding strengths for given materials will vary.

5 If an adhesive is used to enhance the tack, the adhesive may be disposed directly on substrate 26, or it may be the property of a layer of plastic, vinyl or other material (shown here as polymer layer 28). Such plastic, vinyl, or other material has two sides: one with a light tack bond, which is to removably adhere to the disc, while the other side has either a permanent adhesive (in which case, the adhesive/film construction is not removable from
10 substrate 26), or it may have a removable adhesive (which allows removal of the film from substrate 26 to function as a carrier for the disc and to provide protection to the media-side of the disc), or it may be the top layer of a two-ply dry-release construction in which the top layer releases its cohesive bond from the bottom layer, the other side of which remains adhered to the substrate. If the dry-release construction is used, the ply still remaining on
15 the disc can function as a carrier and protect the media side, as above. It should be understood that adhesives are not illustrated in the accompanying figures because their relatively small thicknesses make illustration impractical, but they are understood to be present in the locations described herein.

 The releasable adhesive located in target area 30, contiguously or in segments,
20 retains the disc in the target area, yet allows the disc to be removed or peeled away from substrate 26 (or composite of substrates) for use. While it may be desirable in many applications for target area 30 to be equal to or greater in size than the disc which it will receive (so as to provide contact with and protection to the entire media side of the disc) the actual area of adhesive contact can be minimal, as long as the adhesive contact results
25 in the disc's retention.

 If desired, polymer layer 28 may be employed, using a cling polymer disposed on at least a portion of the surface of substrate 26, the polymer layer being coated or otherwise combined with a low viscosity or other form of releasable adhesive or adhesive construction. Thus, holder 22 would incorporate a composite product having both the
30 properties of cling polymers combined with one or more adhesive(s), e.g.: cling/adhesive composite products such as those commercially available from vendors such as HPS, LLC, of Rhome, TX (products including "Ultra Cling Vinyl", "Ultra Cling Polyester", "Cling

Tack Media" and other products utilizing "microspear technology"), or as manufactured by FLEXcon, Inc., of Spencer, MA (products including FLEXmark[®] cling vinyl with low-tack/removable adhesive V314), or Ritrama, Inc. (product number 3-5753 - 2 mil clear polyprop - 84x4 low tack/low peel adhesive on a 90# liner).

5 Alternatively, a two-ply construction of "dry-release" material may be utilized. In such case, a light adhesive bond is formed on one side of the material (contacting the data storage medium). The bond on the other side of the two-ply construction, adhering it to the substrate, may however be more permanent, if desired. Such dry-release two-ply constructions have a weak cohesive bond between the two plies so that bond failure easily
10 occurs when they are pulled apart. The surfaces of the two dry-release plies are nontacky to the touch. The ply retained on the storage medium allows it to function as a carrier for the disc and to provide protection to the media side of the disc.

 Thus, it should be clear that target area 30 may be formed by a polymer layer alone, a polymer layer plus an adhesive including various film and dry-release structures, or an
15 adhesive alone, all within the scope of the present invention.

 Fig. 5 shows one possible variation of the subject matter of Figs. 1-4, in which target area 130 is non-circular in shape. Target area 130 may match the outer shape of a utilized data storage medium, or may be larger or smaller. It should be understood that target area 130 is shown as including polymer layer 128, but target area 130 may be formed
20 with an adhesive as an addition or alternative, as discussed above.

 Fig. 6 shows another possible variation of the subject matter of Figs. 1-4, in which target area 230 is segmented in shape, rather than continuous. Again, target area 230 is illustrated as being formed of pieces of a polymer layer 228, but could be formed using added or alternative adhesives, and could have varying sizes relative to the utilized data
25 storage medium.

 As shown in Figs. 7 and 8, data storage medium holders may comprise multiple media storage systems of various types. For example, as shown in Fig. 7, substrate 326 includes a plurality of target areas 330. In contrast, as shown in Fig. 8, a plurality of substrates 426 is provided, each with a separate target area 430, forming a disc filing
30 system such as a binder or wallet. If desired, for either example, a protective liner (see Fig. 11) may be provided for each target area, removable by user at time of use. In such an embodiment, the user pulls away the protective liner to reveal the target area, which can

then be used to retain discs safely and conveniently, with direct accessibility. The user places or presses the disc thereon for individual disc storage and/or group filing with other similarly stored discs on substrates, without the necessity of boxes, jewel cases or envelopes, while also providing the consumer with the ability to conveniently include notation concerning the disc or its content directly onto the substrate which holds the disc or onto its liner. The stored and filed discs may be removed and replaced onto target areas on the substrates repeatedly. Also, for either embodiment, target areas may be disposed on both sides of each substrate.

As shown in Fig. 9, holder 522 may incorporate various concepts with regard to graphical matter, in combination with that shown on data storage medium 524. Thus, target area 530 may be at least partially translucent so that the substrate 526 portion beneath remains visible, once the disc is removed from the target area. The graphical material beneath may or may not be duplicated by that on the disc. Thus, a "reveal" may be provided by removing data storage medium 524. Said "reveal" may be used for multiple purposes, including marketing communications and even gaming (as in the revelation of a potential prize). Also, either as an alternative or in conjunction, graphical material across substrate 526 and data storage medium 524 may combine to form a single presentation, such as an image, text, etc., if the medium is placed in one or more predetermined orientations. Further, a polymer layer 528 may include graphical material as well. Alternatively, the predetermined orientation may include a random orientation, with graphical material on the disc and substrate 526 forming a combined image in some fashion (for example, if the disc has a symmetrical pattern such as a concentric "target" on it).

Thus, packaging for data storage media is provided which both retains a disc on a "base", "substrate", or "carrier" such as direct mail brochures, cards (flat or folded), hang-tags such as those which may hook onto objects (such as doorknobs or other fixtures), as well as those which attach by slipping over (as in the case of an aperture in the substrate slipping over the neck of a bottle), or other aesthetic displays, allowing the label side of the disc to be visually incorporated into the display, while at the same time protecting the opposite media side of the disc on the releasable substrate construction. Such provides protection of discs, while allowing discs to be held in place until removed by the user, immediately and easily accessible without the physical barrier of a box or envelope, presenting the disc in a manner which is visually appealing and exciting to the potential

user or consumer, while also maximizing the distributor's opportunity for graphic messaging and printed information on packaging. As an example, when compared to a standard 5"x5" paperboard envelope for the packaging of CDs (the "inside" of which is not imprinted or seen by consumers), a corresponding version utilizing certain of the technology of the present invention provides twice the amount of area for messages to the consumer to be imprinted on the same amount of cardstock, because both sides of the cardstock can be printed, thereby doubling the area for messaging without an increase in the amount of paperboard utilized, and with the added value of allowing additional graphics and information (visible on the disc target area) to be revealed to the consumer upon removal of the disc from the substrate, as well as the information on the disc itself.

As shown in Fig. 10, substrate and/or polymer layer 628 may include a tab 628a disposed on a portion outside target area 630 which the user may grasp to peel away the material from data storage medium 624. Also, such a tab 628a may be useful to help remove a polymer layer 628 from a separate substrate 626, where the polymer layer is (as in being part of a dry-release construction) or is attached and if desired reattachable to substrate 626. A thumb depression 626a may be provided to assist in removing element 628 from element 626, if desired.

In such arrangement, as an option, element 628 may be considered the substrate layer, with element 626 acting as a separate carrier. Element 628 may be formed without a polymer layer but with an adhesive, or with a multi-ply-dry release construction, or with both, as described above. Also, the construction of Fig. 10 may be carried out with either releasable and more permanent adhesives, or with the dry-release materials (using layers 628 and 632), as described above.

Fig. 11 illustrates structure(s) suitable for use with any of the embodiments and options described above, once data storage medium 724 is installed on its target area on substrate 726, it may be topped with another layer of material 732 covering fully or partially the disc/substrate composite, or it may be an extension of the substrate, with or without polymer layer 728, cling properties and/or adhesive properties. Material 732 may be separately applied or folded over to cover the disc. If desired, material 732 may be held in place by exposed cling polymer on the substrate, adhesive or pressure sensitive films, thereby creating a package which on one hand functions like an envelope (with top and bottom layers of protections) but which is disassembled by peeling away layers. Top layer

732 may be partially or fully opaque, transparent, or translucent, as desired. Thus, substrate 726 may take various forms, including an envelope, a folder, a binder, a flat member having an overlay, a pocketed member, a slit member, or a box (either its exterior or interior surface).

5 Fig. 12 shows another embodiment of a holder and package according to the other aspects of the invention. As shown, holder 822 includes a substrate 826 having an indentation 832 configured large enough to accommodate data storage medium 824. As an example, substrate 826 may comprise a piece of cardboard or card stock with an embossed indentation forming walls 834. Walls 834 may be continuous or segmented, and may
10 contact the edges 836 of medium 824, or be spaced from the edges. Target area 830 is at the base of the indentation, and may include a polymer layer 828 (as shown) with or without cling polymers, and with or without additional or alternative adhesives, as discussed above. Also, walls 834 may include an extension of polymer layer. Alternatively, substrate 826 may be formed from two or more parts, for example a piece of
15 cardstock adhered to a second piece with an opening formed therethrough to create a substrate with an indentation therein.

 Alternatively, substrate 826 could also be molded, cast, or formed unitarily or assembled in various other ways. Substrate 826 could extend just beyond the edges 836 of data storage medium 824 to form a circle or a disc, or could extend further, as shown, in a
20 square shape.

 Fig. 13 shows a modification of the structure of Fig. 12, where target area 930, which may include a polymer layer 928 and/or adhesives, is disposed along wall 934.

 Thus, with any of the various embodiments above, whether alone or recombined or modified according to the present teachings, upon placement of the media-side of a disc
25 upon the target area, the disc will be retained on the substrate, protecting the media-side from exposure to dirt, dust, and damage. Importantly, storage and protection of media are achieved without the need for an envelope, pocket, sleeve, box, jewel case, or packaging of any type which is reliant upon a hub for retention of disc media.

 Further, upon manipulation of the substrate and/or the disc media by the user who
30 wishes to remove the disc, the disc peels away from the target area (substrate and layer) to which it adheres, and releases therefrom easily. The disc can advantageously be removed

and replaced repeatedly to display and/or store the media, all the while protecting the underside, or delicate media-side surface of the disc.

Ease of accessibility and of shielding the delicate media-side of the disc are provided, allowing discs to be placed into pockets and bags, for example, without the
5 necessity of envelopes, jewel boxes, or other forms of disc packaging which are bulky and heavy, especially when taken collectively, and manufactured in multiple pieces and complicated and costly to produce, frequently from materials that are subject to easy breakage.

Also, distribution of discs as inserts to books, magazines or other publications is
10 facilitated. Releasable retention of discs on paper, cardstock or other inserts in books, magazines, brochures, or promotional materials, can be provided, until consumers peel them away. The top or label side of the disc is fully visible while retained on the target area, and may be imprinted so as to incorporate the disc into the product, display, graphics or data. Current methods for the insertion of discs to books and magazines involve
15 sometimes complex constructions utilizing various forms of envelopes, many of which cannot be re-utilized after opening by the consumer or create undesirable thickness in magazines.

The present invention thus provides easy and cost-effective storage, protection and distribution of discs, the function of which includes the distribution, handling and storage
20 of blank or recordable disc media, archival storage, filing or protection of recorded discs, including discs for marketing and promotion of a product or services or any other function of media (e.g.: entertainment, information, software, or archival storage).

The present invention is not, however, limited to the use with products such as data storage media or discs. Therefore, it should be understood that the present invention has
25 applicability to the packaging and holding of numerous products via cling polymer. Fig. 14 is a broad example of the holding of a product 1024 on a holder 1022, and the resulting package 1020, made possible by virtue of the teachings of the present invention. Fig. 14 shows diagrammatically in a broad sense one example of a substrate 1026, a cling layer 1028, and a product 1024 according to certain aspects of the invention. These elements
30 may comprise any of the elements mentioned above, and it should be understood that Fig. 14 is representative only and the actual form and arrangement of the illustrated elements could change according to the application. The possibilities for use of the present

invention are so broad that illustrating the full scope of options would be impossible. Accordingly, countless applications are possible within the scope of the present invention, and the specific mention of any one application herein is merely an example and not to be considered limiting.

5 For example, some of the products cling polymer layer may be used to retain include, for example, glass, plastics, metals, ceramics and other non-porous, smooth materials which may comprise part of or be wholly the exterior surface of products. Such products (whether full size, samples or components of products) may include: cosmetics, fragrances, pharmaceuticals, medical products (including those requiring a sterile
10 packaging environment) and various items in the health and beauty category, watches, jewelry, coins, souvenirs and collectibles, electronic devices including phones, cell phones, MP3 players, (and accessories for the aforementioned), other electronics and electronic components including circuit boards, transistors, hearing aids, microphones, cameras, and screens, housewares, all types of jars or bottles (including alcoholic beverages) food,
15 spices, gourmet items, components, parts and other items relating to product assembly, manufacturing and industry, plastic or plasticized cards (such as credit cards, ID cards and gift cards), clothing and accessories, tools, lighting products, alarms, keys, hardware for general utilization (or specialty utilization as in packages of small, fine components for the creation of arts, crafts, or hobbies), or a presentation device for products for promotional
20 purposes (including direct mail). The cling polymer layer may be adhered directly to such products or the products may, if necessary for adherence to the cling layer, be sleeved or otherwise partially or fully packaged in a suitable material so as to have a surface such that it adheres to the cling layer.

Other applications could include data storage devices such as a disc, a flash drive, a
25 memory stick, an encased or enveloped storage media such as a UMD Disc, music or video players or communications devices having solid state memory, disc drives or flash drives, MP3 players, devices to make such data storage devices carryable or wearable, including pockets, clips or hangers, use with flexible pliable foam like composites having the cling material on an outer portion thereof so as to be pressable or nestable therein,
30 merchandizing hang tags or other displays such as those which may hook onto objects (such as doorknobs or other fixtures), be adhesively adhered to objects, as well as those which attach by slipping over (as in the case of an aperture in the substrate slipping over

the neck of a bottle), or be otherwise attached to chains, belts, tapes or strings so as to hang as would a medallion or the like on a person or object, gaming devices, trading cards, lottery tickets, or magnetic substrates for further attachment to magnetic objects for display, information or safety.

5 The present invention therefore relates to packaging for products which may be sleeved, enveloped or encased in smooth, non-porous materials (e.g.: eyeshadow in a compact case, or pharmaceuticals in a blister-pack or dispenser), or which may have a non-porous exterior (e.g.: personal electronic appliances such as a Palm Pilot, collectible items such as coins or medallions), or have some other surface of which when pressed against a
10 material, surface or other packaging construction which is coated or covered with vinyl or other polymer providing cling retention, results in the safe retention of the product against the surface without the use of fugitive glue or other temporary, light tack or removable adhesives.

 The holder and package may be used for consumer goods and other products,
15 retaining the product in the desired position inside a package, keeping it from rattling or otherwise moving inside the package, thus aiding to insure in its protected transport and/or so as to create an aesthetically pleasing presentation upon opening the package. The present invention is not limited to packaging for any type, size or form of product or component of a product, and here hereafter collectively referred to as “products” or
20 “consumer products”.

 The material composing the package or substrate providing physical structure to the interior of the package may be made of any suitable manmade or natural material(s), such as paper, plastic, or combinations thereof. The shape of the interior surface of the package may be coordinately shaped to receive the product (e.g. flat to receive a product which has
25 a flat side, or concave to accept a product which is relatedly convex). The substrate of the interior package surface may be malleable, so that its surface shape may mold or change to accept and/or conform with the product pressed upon it.

 Further illustrative examples of holders and packages for products are shown in Figs. 15-18. It should be understood that these examples are merely illustrative, and no
30 exclusion of any product, holder or package is intended by virtue of the inclusion of these examples.

As depicted, Fig. 15 is a perspective view of a first example of one application of the concepts of Fig. 14, wherein a product comprising a portable music player is attached to a holder. As shown, attaching a product 1124 to a holder 1122, including a substrate 1126 and a cling layer 1128, creates a package 1120. As shown, product 1124 is a portable music device such as an mp3 player. Holder 1122 includes a loop 1130 that may comprise a handle or hanger, as shown. Loop 1130 may be adjustable via buckles, snaps, hook-and-loops fasteners, etc., if desired. Other shapes and types of carrying elements could be substituted for loop 1130, if such functionality were desired, with this or any of the embodiments herein.

Fig. 16 is a cross-sectional view of an example of a holder and product wherein the cling polymer layer is pre-formed to be non-planar. As indicated, holder 1222 includes cling layer 1228 having a non-planar surface 1230. The shaping may be achieved before or after cling layer 1228 is attached to substrate 1226, and by various methods and from various materials. Substrate 1226 could therefore be paperboard, styro-foam, metal or plastic, and could comprise an inner or outer portion of an item, or even another product. As shown, a contact surface 1232 of product 1224 conforms to the shape of contact surface 1230 of the cling layer, which can improve the attachment in some applications.

Figs. 17 and 18 are cross-sectional views of an alternate example of a holder and product wherein the cling-polymer layer is non-planar, where the non-planar shape is formed via contact with the product. As shown, product 1324 has an irregular contact surface 1332. Cling layer 1328 has a planar or other shaped contact surface 1330 not conforming to the contact surface 1332 prior to attachment. As shown in Fig. 17, surface 1330 is substantially flat. After application of product 1324, substrate 1326 is compressed to allow cling layer surface 1330 to conform to the shape of surface 1332 of product 1324. Substrate 1326 could be permanently or temporarily compressed by the contact, as desired, and could be made of various solid, or liquid or gel-like materials, and in various ways.

In each of the examples shown in Figs. 14-18, any of the options and modifications mentioned previously may be applied to arrive at further embodiments and vice-versa.

The cling polymer, such as what is commonly called static cling vinyl, is disposed as a film or layer on at least a portion of the surface of the substrate, as a target area for receipt of the product. Preferably, the target area, contiguously or in segments covers an area that is large enough, in proportion to the product, so that application of the product to

the target area results in the retention of the product to the target area. The target area may be equal to or greater in size than the product that it will receive. In one aspect of the present invention, the static cling layer is disposed on the entire surface of the substrate. In another aspect of the present invention, the target area is shaped coordinately with the product it receives. In yet another aspect of the invention, the polymer may comprise the entire body of the package, all or a portion of which may have static cling properties to serve as a target area for the retention of the product.

A suitable adhesive to attach the static cling layer to the substrate may be used in the present invention. Preferably, clear cling polymer will be adhered to the substrate utilizing an adhesive that is likewise translucent, so as to allow graphics and information printed on the substrate or substrate construction to be clearly viewable.

The cling polymer layer for the product holders may be the types discussed above, such as "static cling vinyl" formulated from polyvinyl chloride (PVC) and a plasticizer (a liquid), such as those commercially available from vendors such as Ritrama Inc, Minneapolis, MN (Products no. 3-1550 "Gloss clear static cling non-topcoated vinyl," 3-1321 & 3-1322); and FLEXcon, 1 FLEXcon Industrial Park, Spencer, MA ("Static Cling Vinyl"). Preferably, static cling vinyl contains Dioctyl Phthalate, Trioctyl Trimellitate or other plasticizer to provide or enhance its properties of cling adhesion. Static cling vinyl has a smooth finish and adheres firmly to any non-porous, smooth, glossy surface such as glass, various plastics and metals, while at the same time it is very pliable and bendable.

Upon placement of the product upon the target area of the static cling layer, the product is held to the static cling layer and retains it on the substrate, protecting the product from movement inside the package, thus aiding to insure against damage which could result from such movement. The present invention achieves storage and protection of products in such packaging without the utilization of fugitive glue or other adhesives, which are sticky to the touch and sometimes leave a sticky residue on the product or on the interior surface of the package. The static cling layer in the construction is preferably, though not necessarily, at least partially translucent so that substrate beneath remains visible, once the product is removed from target area.

Further, according to the present invention, upon manipulation of the substrate and/or the product by the user who wishes to remove the product, the product peels away from the target area (substrate and layer) to which it adheres, and releases therefrom easily.

The present invention is advantageous, as the holding capability of the substrate is not measurably reduced with repeated use, unlike traditional adhesives, and offering a functionality which is impossible utilizing fugitive glue. Therefore, the product can be removed and replaced repeatedly to display and/or store the product inside the protective packaging. The present invention provides the advantages of ease of accessibility, of the non-sticky retention of products in packaging, and of the lack of residue such as that left on products by adhesives including fugitive glue.

In another aspect of the present invention, a packaging for products is provided which both retains the product within an advertisement or other aesthetic display, for instance in a page or insert of a magazine. The present invention provides products to be held in place until removed by the user, easily accessible without the barrier of a box or envelope, visually appealing and exciting to the potential user or consumer.

The present invention provides easy and cost-effective storage, protection and distribution of products or product samples which are handed out or otherwise distributed, the function of which may be product sampling, advertising, marketing or promotion of a product or services, or any other function of product premiums.

In another aspect of the present invention, a packaging system comprises a plurality of substrates grouped together, each substrate having a static cling layer for removably receiving at least one product. The stored and filed products may be removed and replaced onto the substrates, such as cards, repeatedly.

Therefore, it should be understood, that use of cling polymer material can be used in various diverse ways to hold products, thereby forming a package. The present invention is thus not limited to any type of product, holder or resulting package, according to the above teachings.

It will be apparent to those skilled in the art that various modifications and variations can be made in the present invention without departing from the scope and spirit of the invention. For example, specific shapes of various elements of the illustrated embodiments may be altered to suit particular applications. It is intended that the present invention include such modifications and variations as come within the scope of the appended claims and their equivalents.

I CLAIM:

1. A holder for a product, the holder comprising:
a substrate separate from the product; and
a cling polymer layer attached to at least a portion of the substrate, the cling polymer layer having an outer surface defining a target area configured for releasably securing the product to the substrate, whereby the product may be repeatedly placed on the target area to secure the product to the substrate for handling as a unit.
2. The product holder of claim 1, wherein the cling polymer layer is configured for securing a product including one of glass, plastics, metals, ceramics and other non-porous, smooth materials.
3. The product holder of claim 1, wherein the target area is at least as large as a surface area product.
4. The product holder of claim 1, wherein the target area is continuous.
5. The product holder of claim 1, wherein the target area is segmented.
6. The product holder of claim 1, wherein the substrate includes one of a natural material product, a paper product, a polymer product, a synthetic product, or combinations thereof.
7. The product holder of claim 1, further including an adhesive disposed on at least a portion of the cling polymer layer for contacting the product to assist in releasably securing the product.
8. The product holder of claim 1, wherein the substrate includes at least two surfaces, and the holder includes two cling polymer layers, each cling polymer layer being disposed on one of the surfaces.

9. The product holder of claim 1, wherein the cling polymer layer includes a vinyl or polyester.
10. The product holder of claim 1, wherein the cling polymer layer includes a plasticizer.
11. The product holder of claim 1, wherein the cling polymer layer is at least partially translucent or transparent, whereby the substrate is at least partially visible through the cling polymer layer.
12. The product holder of claim 11, wherein the substrate includes graphical material and the product is releasably securable atop the graphical material via the cling polymer, whereby removal of the product reveals the graphical material.
13. The product holder of claim 1, wherein the product and the substrate include graphical material configured to co-operatively form a single presentation when the product is attached to the target area in a predetermined orientation.
14. The product holder of claim 1, wherein the product holder includes a plurality of the target areas for releasably securing a plurality of the products.
15. The product holder of claim 14, wherein the cling polymer layer includes a plurality of pieces spaced from each other, each of the target areas being formed from one of the pieces of the cling polymer layer.
16. The product holder of claim 15, wherein the pieces are disposed laterally with respect to one another on the substrate.
17. The product holder of claim 15, wherein the product holder includes a plurality of the substrates, each of the pieces of the cling polymer layer being disposed on a respective one of the plurality of the substrates.

18. The product holder of claim 1, wherein only the cling polymer layer secures the product to the substrate.
19. The product holder of claim 7, wherein only the cling polymer layer and an adhesive secure the product to the substrate.
20. The product holder of claim 1, wherein the cling polymer layer is permanently attached to the substrate.
21. The product holder of claim 1, wherein the cling polymer layer is removably attachable to the substrate.
22. The product holder of claim 21, further including one of a two-ply dry-release or other type of cohesive construction, a fugitive adhesive, or low tack adhesive for facilitating the removable attachment of the cling polymer layer or a composite construction of the cling polymer layer and a substrate
23. The product holder of claim 1, wherein the cling polymer layer is removably attachable and reattachable to the substrate.
24. The product holder of claim 1, wherein the substrate defines a wall or three-dimensional shape, configured for receiving the product.
25. The product holder of claim 24, wherein the target area is surrounded by the wall or three-dimensional shape.
26. The product holder of claim 24, wherein the target area is disposed on the wall or three-dimensional shape.
27. The product holder of claim 1, wherein the product material and the cling polymer layer material separate in a 180 degree peel force test at about 50 to about 200 grams.

28. The product holder of claim 1, wherein the substrate comprises one or more of an envelope, a folder, a binder, a flat member having an overlay, a pocketed member, a slit member, or a box.

29. The product holder of claim 1, wherein the cling polymer layer has a non-planar surface.

30. A holder for a product having a first surface, the holder comprising:
a base separate from the product; and
means disposed on the base for contacting the product via the first surface to thereby releasably secure the product to the base, whereby the product may be repeatedly secured to the base for handling as a unit, the means for contacting including a cling polymer layer.

31. The holder of claim 30, wherein the cling polymer layer is disposed on at least a portion of the base.

32. The holder of claim 30, wherein the cling polymer layer is permanently attached to the base.

33. The holder of claim 30, wherein the cling polymer layer is removably attachable to the base.

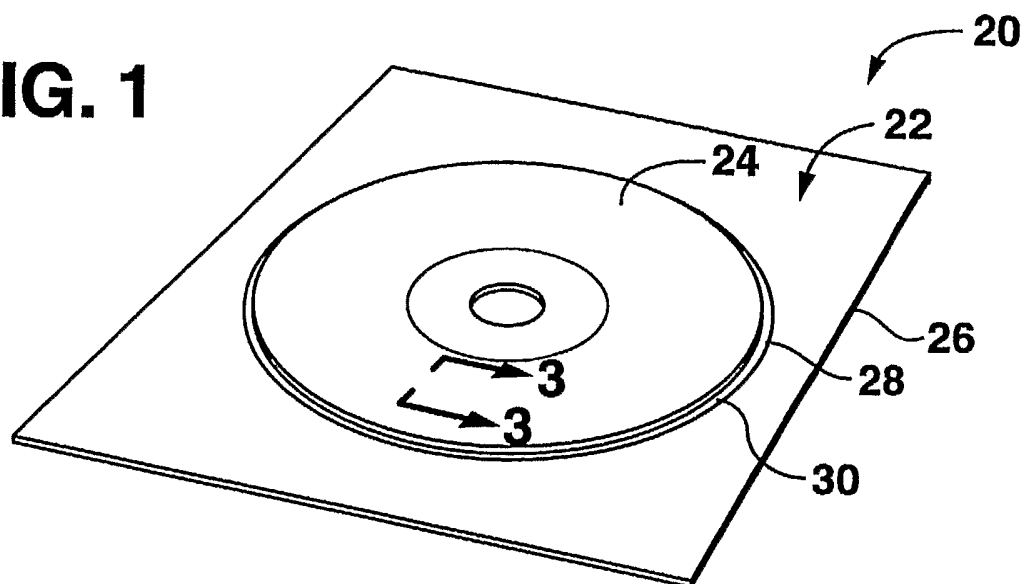
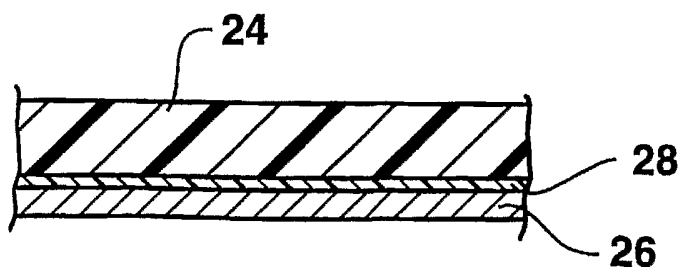
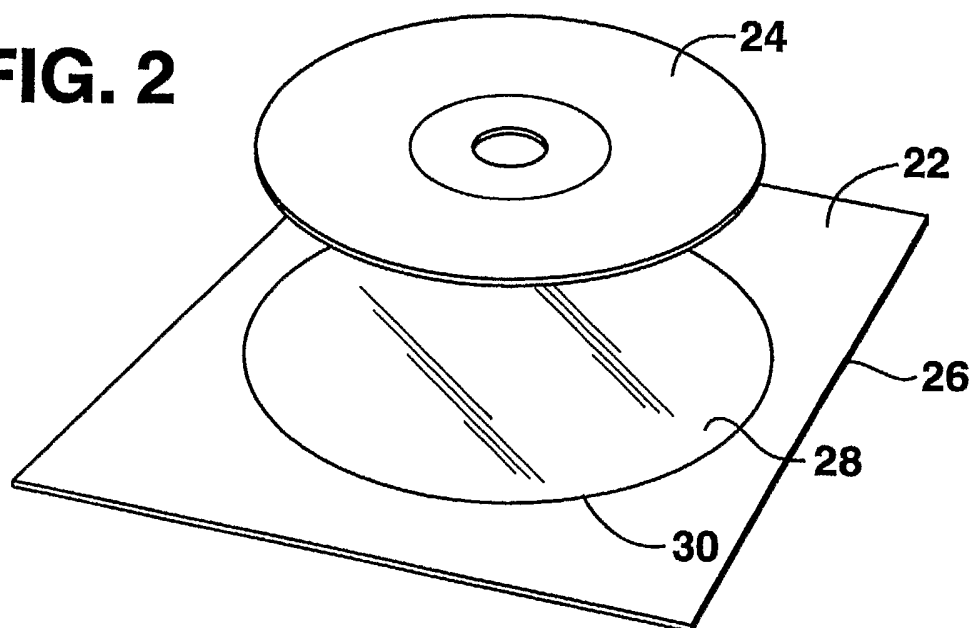
34. The holder of claim 30, wherein the cling polymer layer is removably attachable and reattachable to the base.

35. The holder of claim 30, wherein the means for contacting includes an adhesive disposed on at least a portion of the base.

36. The holder of claim 30, wherein the means for contacting includes a substantially planar contact surface for contacting the first surface of the product and securing the product to the base.

37. The holder of claim 30, wherein the product material and the base material separate in a 180 degree peel force test at about 50 to about 200 grams.
38. The holder of claim 30, wherein the base includes at least two surfaces, the means for contacting being disposed on the surfaces.
39. The holder of claim 30, wherein the cling polymer layer has a non-planar surface.
40. A package including a holder as in any of the preceding claims and at least one of the product attached to the holder via the cling polymer.
41. The package of claim 40, wherein the product is one of glass, plastics, metals, ceramics, non-porous, or smooth materials.

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FIG. 1**FIG. 2****FIG. 3**

SUBSTITUTE SHEET (RULE 26)

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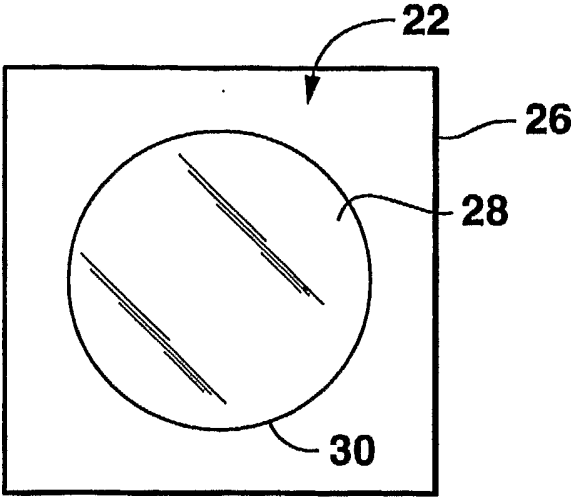


FIG. 4

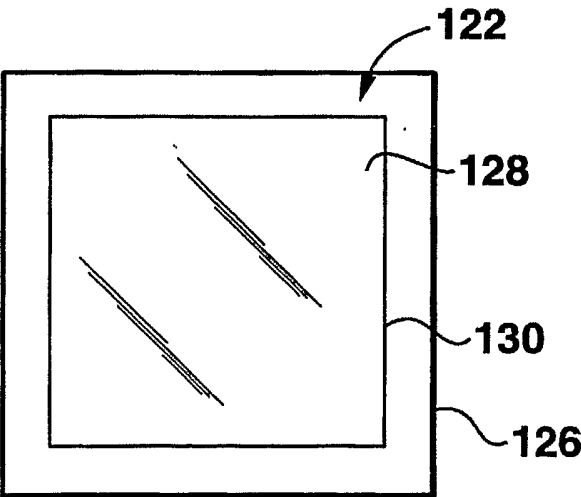


FIG. 5

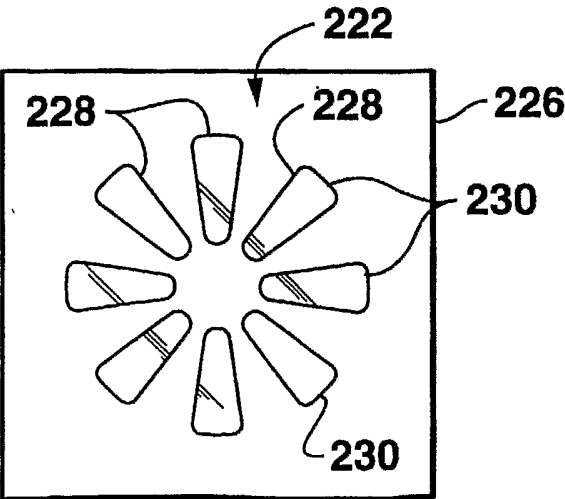
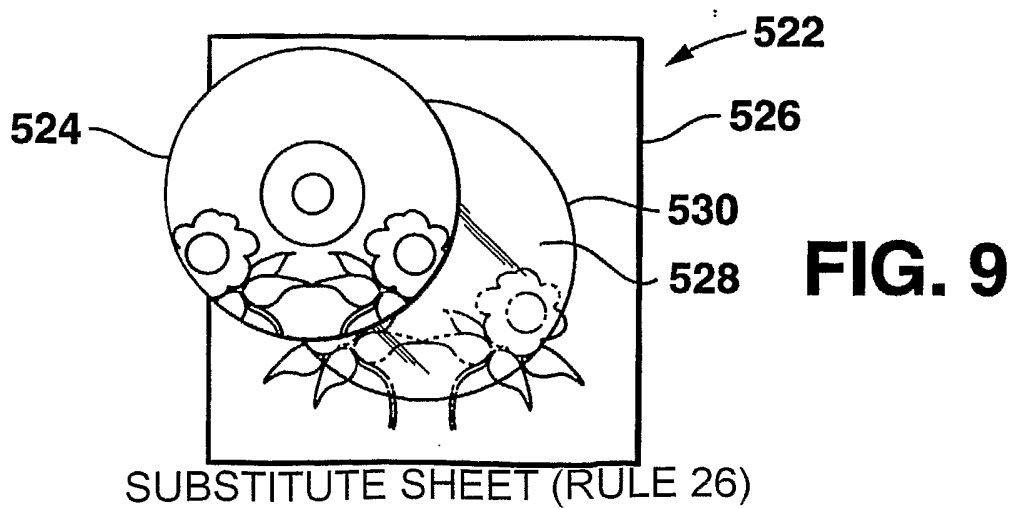
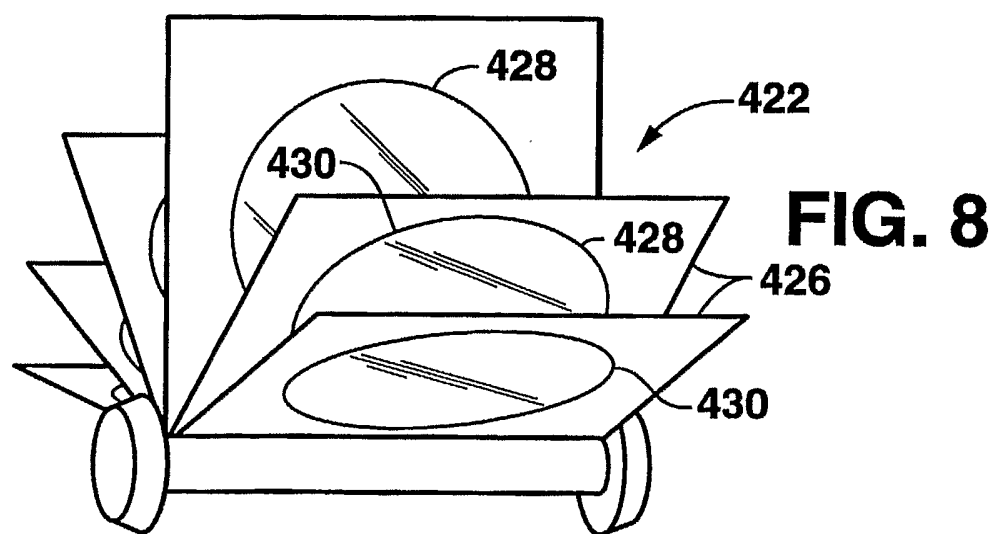
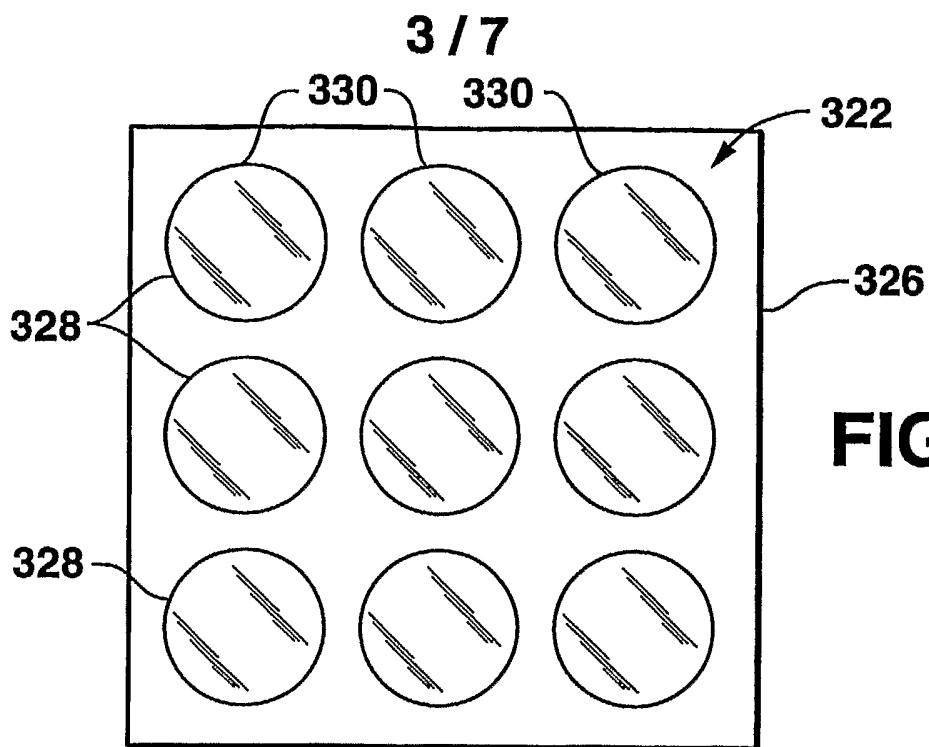


FIG. 6



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FIG. 10

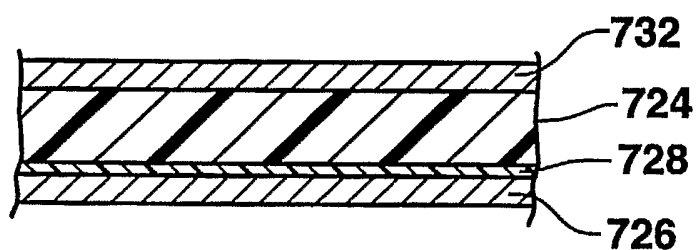
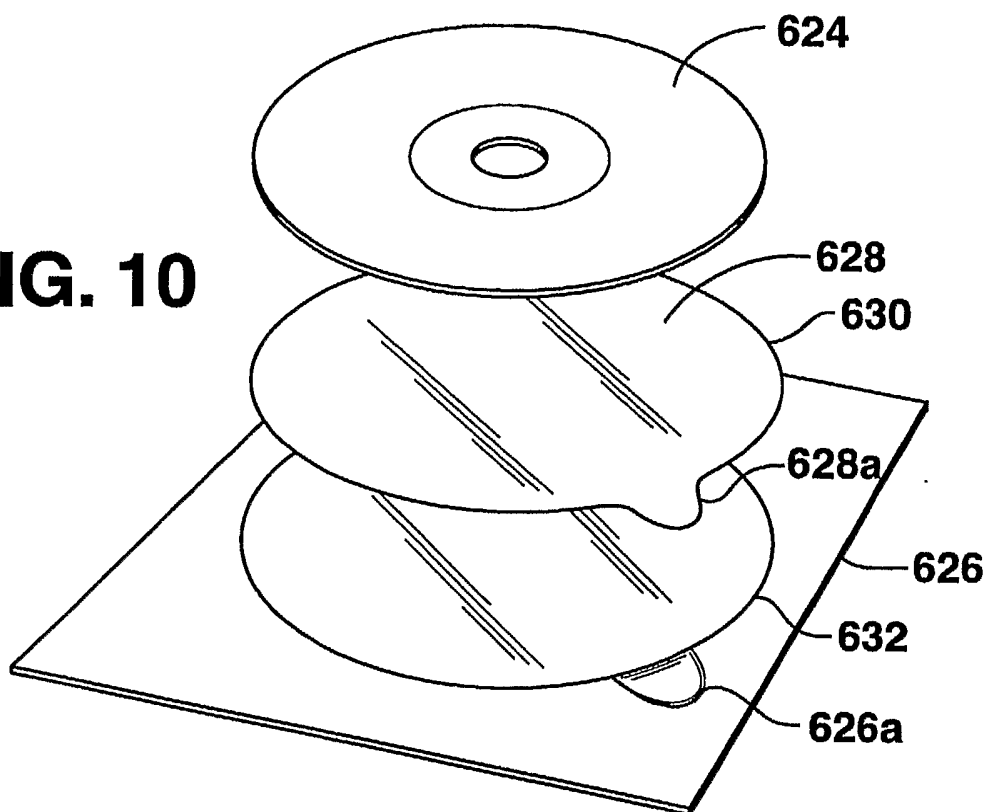


FIG. 11

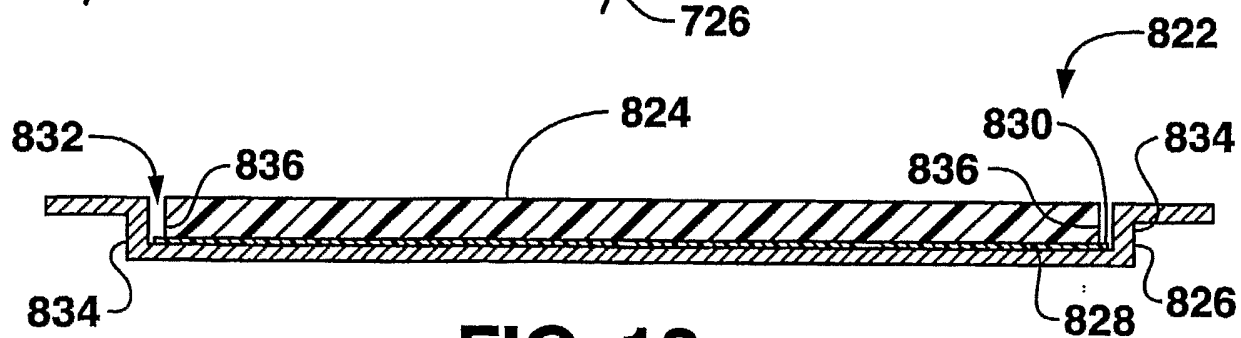


FIG. 12

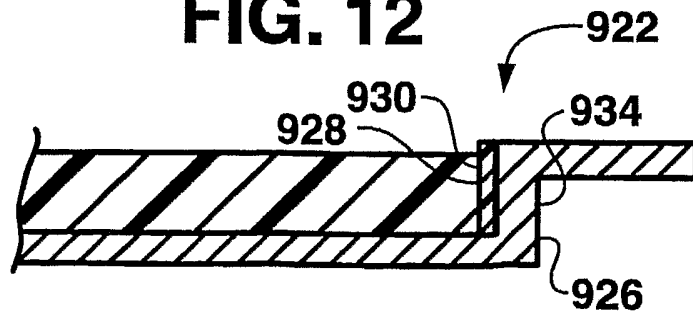


FIG. 13

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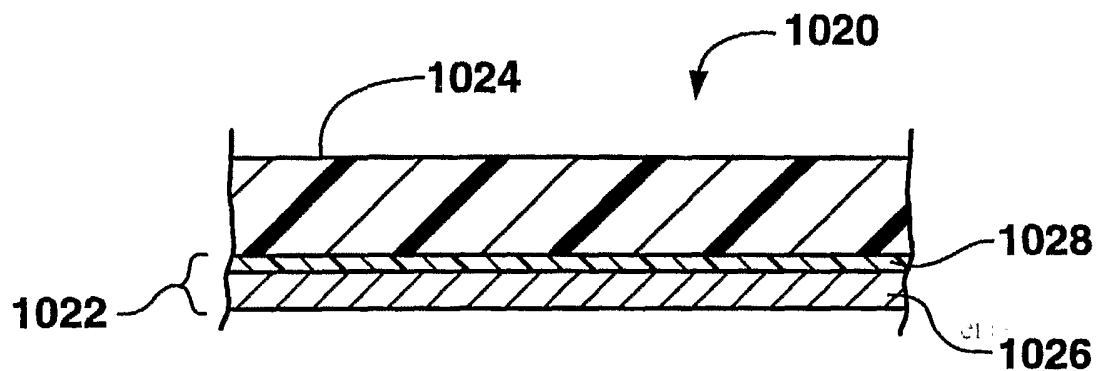


FIG. 14

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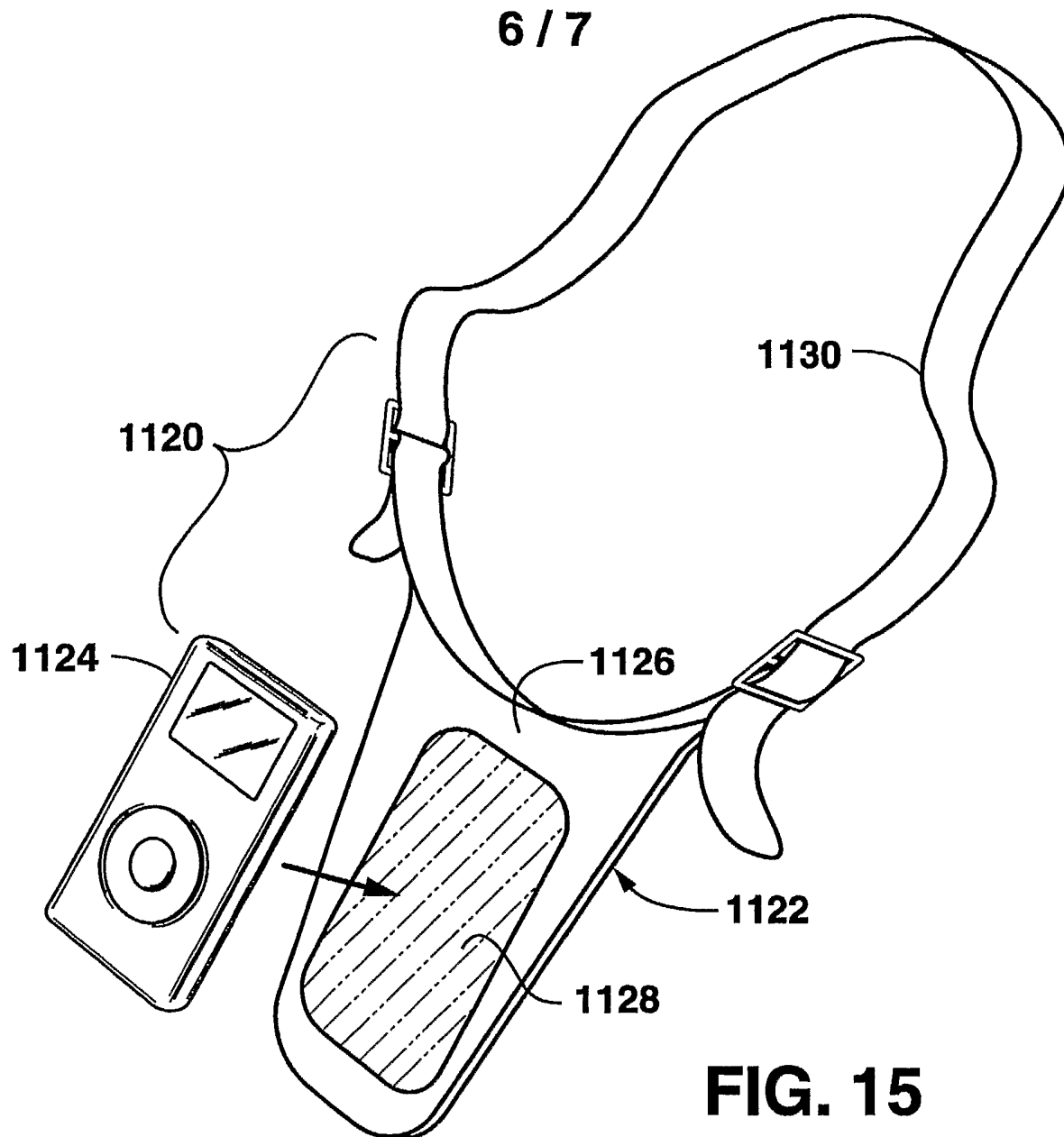


FIG. 15

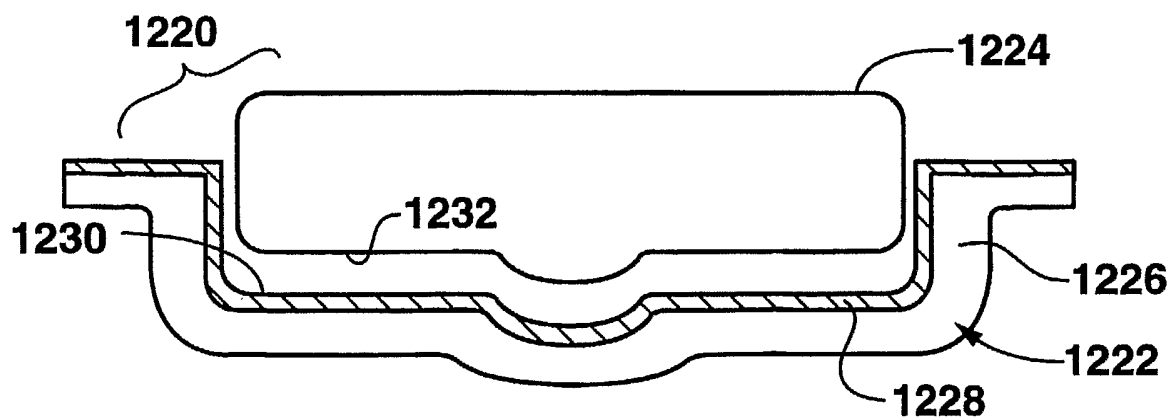
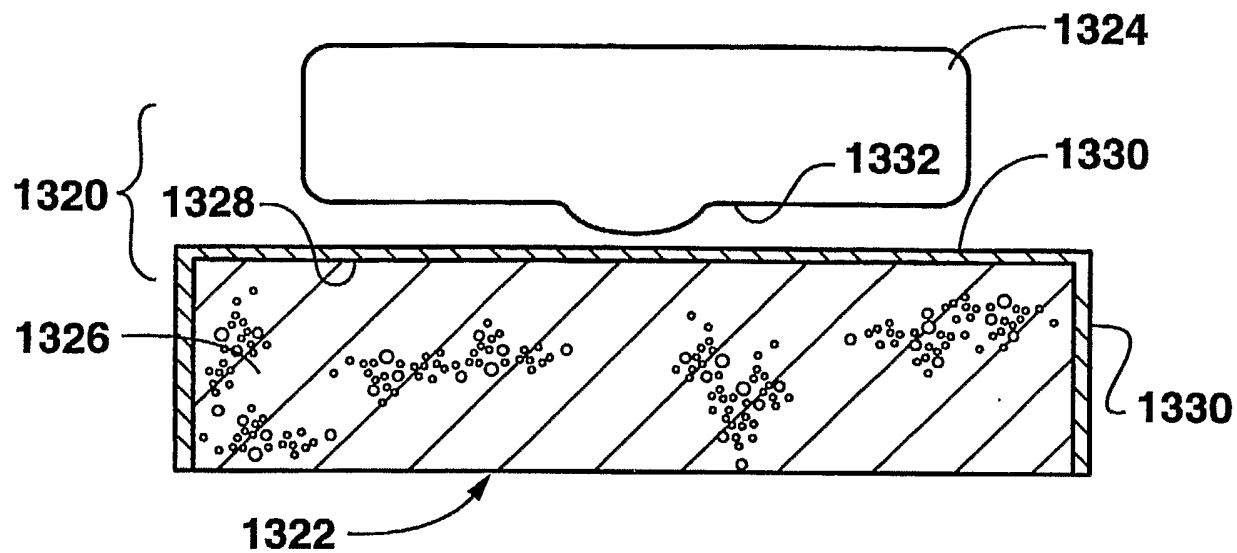
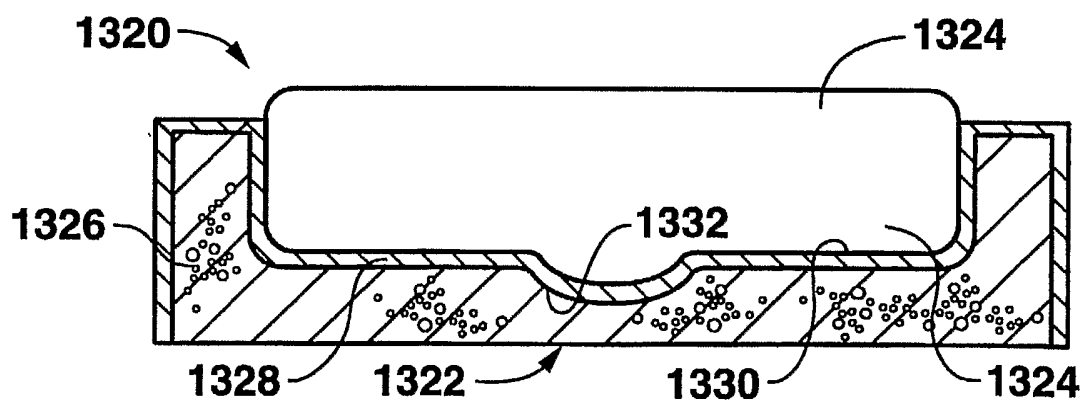


FIG. 16

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**FIG. 17****FIG. 18**