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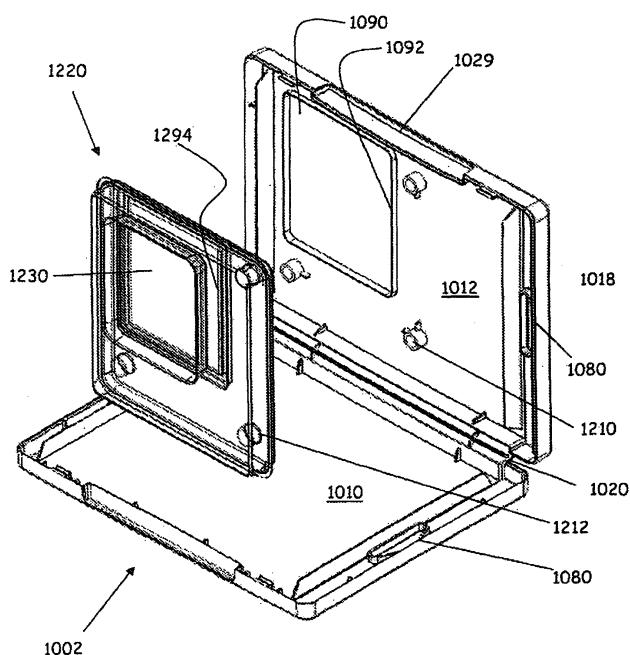
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(54) **Universal retail security package with cover window**

(57) An apparatus for holding an item, the apparatus comprising a base portion defining a volume within said

base portion a receiving area to receive an item carrier and at least one item carrier adapted for holding an item within said volume of said base portion.

FIG. 12



Description

BACKGROUND

[0001] Various packaging structures have been used for containing optical media such as CDs and DVDs. Packaging may include paper or paperboard boxes, injection molded cases, and combinations thereof. One example of such a package is US Patent 5,788,068, which discloses a case with internal features for securely holding optical disk media on a specialized hub. Injection molded cases are widely used for CDs, DVDs, and like media, particularly when a secure package is desired that is somewhat difficult to open, thus helping prevent in-store theft. The cases also provide a storage container for the optical media after its purchase.

[0002] Another packaging structure is a "clamshell," a relatively hard, thin, usually transparent plastic formed as a box around a valuable article, such as a software box, video game cartridge, digital memory device, and other products such as high-value electronic items. Clamshell packaging may be customized for each product. The periphery of a clamshell package is often sealed and the material is usually durable enough that a sharp tool is needed to open, or at least initiate opening, of the clamshell. A clamshell package is often substantially larger than the product it encloses. After opening, clamshell packages are usually disposed of, and the significant amount of waste plastic is seen as an environmental disadvantage. It would be useful to have an alternative to a clamshell package, which provides product security but which need not be disposable and which may require less material, or would be more readily adapted for various sizes and types of product items.

SUMMARY

[0003] This invention provides for a packaging a variety of different sized or shaped items in a single size package. The package for example may hold one or more optical disks, a game cartridge, a memory card or memory stick, an electronic music player, etc. The outer case of the package is provided in a single size, or a small number of sizes. The outer case may be reusable in the store or by the customer after purchase. It provides security, durability, ease of handling, and space for graphics. Items may be held in small trays or nesting structures that fit within the outer case.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] FIG. 1 illustrates a perspective view of an outer case for a package;

[0005] FIG. 2 illustrates a perspective view including a locking device that protrudes into the outer case;

[0006] FIG. 3 illustrates a perspective view, in an un-assembled state, including a locking device that surrounds a periphery of the outer case in an embodiment

according to the invention;

[0007] FIG. 4 illustrates a perspective view, in a partially assembled state, including a locking device that surrounds a periphery of the outer case in an embodiment according to the invention;

[0008] FIG. 5 illustrates a perspective view of an outer case having internal devices for holding various contents in an embodiment according to the invention;

[0009] FIG. 6 illustrates a perspective view including an inner tray for containing discs in an embodiment according to the invention;

[0010] FIG. 7 illustrates a perspective view including an inner tray for containing a memory device in an embodiment according to the invention;

[0011] FIG. 8 illustrates a perspective view of an outer case having other internal devices for holding various contents in an embodiment according to the invention;

[0012] FIG. 9 illustrates examples of holding devices;

[0013] FIG. 10 illustrates a perspective view of an outer case having a cover window and a latch;

[0014] FIG. 11 illustrates a perspective view of the outer case of FIG. 10, with the latch open;

[0015] FIG. 12 illustrates a perspective inside view of an outer case having a cover window, with an item inside to be displayed in the window; and

[0016] FIG. 13 illustrates a perspective outside view of the outer case of FIG. 12, with an item displayed through the window.

DETAILED DESCRIPTION

[0017] FIG. 1 illustrates a perspective view of a typical case 100. The case is preferably molded from a plastic material, such as an injection-molded material. The case has a back 110, top edge 114, bottom edge 116, opening side edge 118, hinge side edge (or spine) 120, hinge area 122, and front 112. The front is hinged to allow it to close over the remainder of the case 100. The case defines an interior volume for receiving items as further described below. The case design may have many variations, including having the edges formed on the front of the case (instead of on the back 110 as shown), or having the edges shared between front and back. Also the spine design may vary, and there may be more than one hinge line in the hinge area.

[0018] FIG. 2 illustrates a perspective view of a case 200 utilizing a locking device 210, such as the Red Tag® locking device disclosed in published US Application 20040123311A1. The case has a slot 202 along one edge for receiving a portion 212 of the locking device 210. The front of the case also has another slot 204 for receiving portion 214 of the locking device 210. When the case 200 is closed, and the locking device 210 inserted therein, the case is held closed by the locking device. Typically the locking device 210 has one or more means to retain it securely in the case 200.

[0019] FIG. 3 illustrates a perspective view, in an un-assembled state, of a case 300 and a locking device

(parts 350 and 360) that surrounds a periphery of case 300 in an embodiment according to the invention. Case 300 is shown closed, and the back 310 and front 312 are indicated. The front 312 is attached to the case 300 along hinged edge 322. Dovetail grooves 330 may be provided along one or both sides, that is, parallel to hinged edge 322, and /or along the opposite side. In another embodiment (not shown) the dovetail grooves may be provided on the top edge 314 and bottom edge 316, and suitable locking devices (discussed below) provided to fit thereon.

[0020] A locking device is shown, comprising a first locking collar 350 and second locking collar 360. These locking collars slide around the closed case 300. First locking collar 350 may include dovetail protrusions 356 that fit into the dovetail grooves 330 in the case 300. First locking collar 350 may also include ledges 352 and 354 that overlap the periphery of case 300. First locking collar 350 may include a locking device such as ratchet area 370 proximate to locking collar 375.

[0021] Second locking collar 360 may include dovetail protrusions 366 that fit into the dovetail grooves 330 in the case 300. Second locking collar 360 may also include ledges 362 and 364 that overlap the periphery of case 300. Second locking collar 360 may include a locking device such as ratchet area 380 on locking strap 385.

[0022] FIG. 4 illustrates a perspective view of case 300 with locking collars 350 and 360 partially assembled around the case. The dovetail protrusions 356 and 366 on the locking collars slide into the dovetail grooves 330 on case 300. If the locking collars 350, 360 are slid further together they will enclose case 300 around its entire perimeter. Ratchet areas 370 and 380 will become engaged to hold locking collars 350, 360 securely together, similar for example to the action of a "wire tie" device. Ledges 352, 354, 362, 364 will cover at least portions of the perimeter of case 300, on both front and back sides, preventing the case from being opened. For additional security, dovetail grooves 330 and protrusions 356, 366 will prevent collars 350, 360 from being flexed outward away from the case, as might be attempted in an effort toward unauthorized entry into the case.

[0023] Variations on the dovetail grooves 330 and protrusions 356, 366 may be used to secure locking collars 350, 360 onto case 300. For example, the dovetail protrusions may be discontinuous, or may be replaced by one or more buttons that would be secured within grooves 330. Rather than the classic shape shown, the dovetail geometry could be a different shape such as an "L" or "T" shape, that could be slidably engaged in one direction (along the edge of case 300) without allowing movement perpendicular to the sliding direction. The ledges 352, 354, 362, 364 could be discontinuous, as long as they provide sufficient strength to prevent opening case 300 or removing it from the locking collars.

[0024] Variations on the ratchet devices 370, 380 may be used to secure locking collars 350, 360 together. For example, a pin and tab, a barbed pin, an adhesive connection may be used instead of the ratchet.

[0025] FIG. 5 illustrates a perspective view of a case 500 have internal devices for holding various contents, as exemplified by pins 510. Pins 510 are shown as short round posts, but could take other shapes as well. The pins are shown as simple right cylinders, but could be tapered, toothed, barbed, having varying diameter or cross section, or provided in any other shape suitable for helping to engage and hold items or devices within case 500. The number and location of pins 510 may be chosen to suit the intended contents of case 500. Preferably 510 pins are arrayed to permit use with a large variety of contents.

[0026] FIG. 6 illustrates a perspective view where case 500 holds tray 600 for containing discs such as DVDs or CDs. For example, tray 600 may be provided with an area 610 to receive a disc, which may be held on center hub 620. Tray 600 may include one or more holes 630 to receive pins 510, or the tray may be sized or shaped to fit within tray 500 without use of pins 510. Preferably the pins 510, either alone or in association with holes 630, hold tray 600 so that it does not move within case 500. The pins 510 may engage the holes 630, or other points such as the periphery of tray 600, by a snap action, a sliding action, a friction fit, or other similar engagements.

[0027] FIG. 7 illustrates a perspective view where case 500 holds a tray or carrier 700 for containing a memory device such as a computer DRAM board 710, which may be attached to carrier 700 by suitable means such as blister wrap or a snap-open cover. Carrier 700 may include one or more holes 730 for receiving pins 510. One or more pins such as 512 may abut the periphery of carrier 700 to help hold it in place.

[0028] FIGs. 6 and 7 each show a single tray 600 or carrier 700 used within case 500, but the case may be used to accommodate more than one tray or carrier, potentially having different sizes or shapes. For example the carrier 700 seen in FIG. 7 could also fit in the same case that holds tray 600 shown in FIG. 6.

[0029] FIG. 8 shows another embodiment of the invention, wherein a holding device 810 such as a clip is molded into case 800. One or more of clip 810 may be molded into the case 800, at any desired location. The location, shape, and size of the clip 810 may be determined for whatever items are to be held by the clip 810. The clip 810 may be provided for example through the user of appropriate mold inserts during the production of the case 800, as by injection molding. The clip 810 in use may retain a small package 820 such as a blister wrapped item 830, for example a memory stick or card. Small package 820 may also be a small 'clamshell' type package. More than one package 820 may be held, including more than one size or shape package, and including items similar to CD tray 600 seen in FIG. 6.

[0030] FIG. 9 shows side view sample embodiments of clip 810. Clip 910 is a simple "L" shape. Clip 920 incorporates a "V" shaped protruding detent for helping to hold package 820. Clip 930 incorporates a radiused pro-

truding detent. Clip 940 incorporates a more rounded protruding detent. Clip 950 incorporates a recessed detent. Clip 960 has a curved cross section that may provide additional 'spring' for better holding power. Other clip designs may also be used. The edge of package 820 may be indented, grooved, ribbed, etc. to cooperate with the holding action of clip 810.

[0031] FIG. 10 illustrates a perspective view of the outside of case 1000 having a cover window 1090. The case is preferably molded from a plastic material, such as an injection-molded material. The case has a back 1010 (not shown in FIG. 10), front 1012, top edge 1014, bottom edge 1016, opening side edge 1018, and hinge side edge (or spine) 1020. The case may have an aperture or hole 1080 for hanging from a display peg or hook. The case may also have a latch 1025, shown closed in FIG. 10 and open in FIG. 11.

[0032] The cover window 1090 is provided as a hole in front cover 1012. This window allows one to view an item within the case as described below. The case design may have many variations, besides the example shown in FIGs. 10 and 11.

[0033] FIG. 11 illustrates a perspective view of the outside of case 1000 with latch 1025 opened. Latch 1025 may have engagement means, for example protrusion 1026 and recess or hole 1027, which engage to latch the case. Case 1000 may have other closure means, for example snap-fit engagement means elsewhere on the case, for example between edges of the front 1012 and back 1010. Latch 1025 may also be used to cover a finger well located behind latch 1025 (such as finger well latch 1029 shown in FIG. 12).

[0034] FIG. 12 illustrates a perspective view of the inside of another case 1002, also having a cover window 1090. Instead of having the latch 1025 shown in FIGs. 10-11, this case has a finger well latch 1029, but is otherwise similar. A latch such as finger well latch 1029 may facilitate use with a security device such as that shown in FIG. 2. The case has a back 1010 and front 1012. Cover window 1090 is shown as a hole in front 1012, the hole being preferably flush with the outside surface of front 1012. On the inner surface of front 1012, a lip 1092 may preferably be provided around the cover window 1090.

[0035] The cover window 1090 allows visual access in order to see into the case. In a preferred embodiment, a clamshell or blister package 1220 is placed inside the case. The clamshell 1220 is provided with one or more recesses 1212 that may engage one or more bosses 1210 on the inside surface of the case, for example on the inside of front 1012 as shown. The recesses and bosses thus hold the clamshell 1220 in a preferred location and orientation for viewing through cover window 1090. The clamshell 1220 preferably has an outwardly indented area 1294 that will fit within cover window 1090, and be flush with the outside surface of front 1012. The clamshell 1220 may have a recess or groove to engage lip 1092. Clamshell 1220 is preferably larger than cover

window 1090. Clamshell 1220 may have a receptor site such as recess 1230 to receive an item, for example an electronic device (not shown) such as a memory card. Clamshell 1220 may incorporate a layer to cover the item, for example a welded or snap-on plastic layer (not shown).

[0036] FIG. 13 is a perspective view from the outside of an open case, showing the case front 1012 having cover window 1090 with clamshell 1220 visible in the cover.

[0037] The security device shown in FIG. 2, the locking collar shown in FIG. 3 and the customizable interior tray arrangements shown in FIGs. 5-13 may be used in combination with one another.

[0038] Methods of making and using the case, locking devices, and nesting trays in accordance with the invention should be readily apparent from the mere description as provided herein. No further discussion or illustration of such products or methods, therefore, is deemed necessary.

[0039] While preferred embodiments of the invention have been described and illustrated, it should be apparent that many modifications to the embodiments and implementations of the invention can be made without departing from the spirit or scope of the invention. Although the preferred embodiments illustrated herein have been described in connection with an injection molded plastic case and thermoformed nesting trays, with product items including optical disks and memory devices, these embodiments may easily be implemented in accordance with the invention in other structures or materials, and with other product items. Although the examples given are for cases enclosing one, two, or four nesting trays, the design can be readily extended to other numbers of nesting trays in special arrangements other than those given by example herein.

[0040] It is to be understood therefore that the invention is not limited to the particular embodiments disclosed (or apparent from the disclosure) herein, but only limited by the claims appended hereto.

Claims

1. An apparatus for holding an item, the apparatus comprising:
 - a base portion (500, 800, 1000) defining a volume;
 - within said base portion (500, 800, 1000) a receiving area to receive an item carrier (600, 700, 820, 1220); and
 - at least one item carrier (600, 700, 820, 1220) adapted for holding an item within said volume of said base portion (500, 800, 1000).
2. The apparatus of claim 1, further comprising within said base portion (1000) a window (1090) for viewing

said item.

3. The apparatus of claim 2, wherein said item carrier (1220) is held in proximity to said window (1090). 5
4. The apparatus of claim 2, wherein said window (1090) comprises an inward facing lip (1092).
5. The apparatus of claim 2, wherein an external facing surface of said item carrier (1220) extends through said window (1090) and is flush with the external surface of said base portion (1000). 10
6. The apparatus of claim 2, wherein said item carrier (1220) is transparent. 15
7. The apparatus of claim 18, wherein said item carrier (1220) is a clamshell or blister package.
8. The apparatus of claim 1, wherein said item carrier (600, 700, 820, 1220) is held by one or more pins (510, 1210) attached to said base portion (500, 800, 1000). 20
9. The apparatus of claim 15, said pins (510, 1210) having a shape to facilitate retention of said item carrier (600, 700, 820, 1220). 25
10. The apparatus of claim 1, wherein said item carrier (600, 700, 820, 1220) is held by one or more clips (810) attached to said base portion (500, 800, 1000). 30
11. The apparatus of claim 17, said clips (810) having a shape (910, 920, 930, 940, 950, 960) to facilitate retention of said item carrier (600, 700, 820, 1220). 35
12. The apparatus of claim 1 wherein said item carrier (600) is adapted for holding a disk.
13. The apparatus of claim 1, wherein said item carrier (700, 820, 1220) is adapted for holding an electronic device (710). 40
14. The apparatus of claim 1, wherein said item carrier (700, 820, 1220) is adapted for holding a memory device (710). 45

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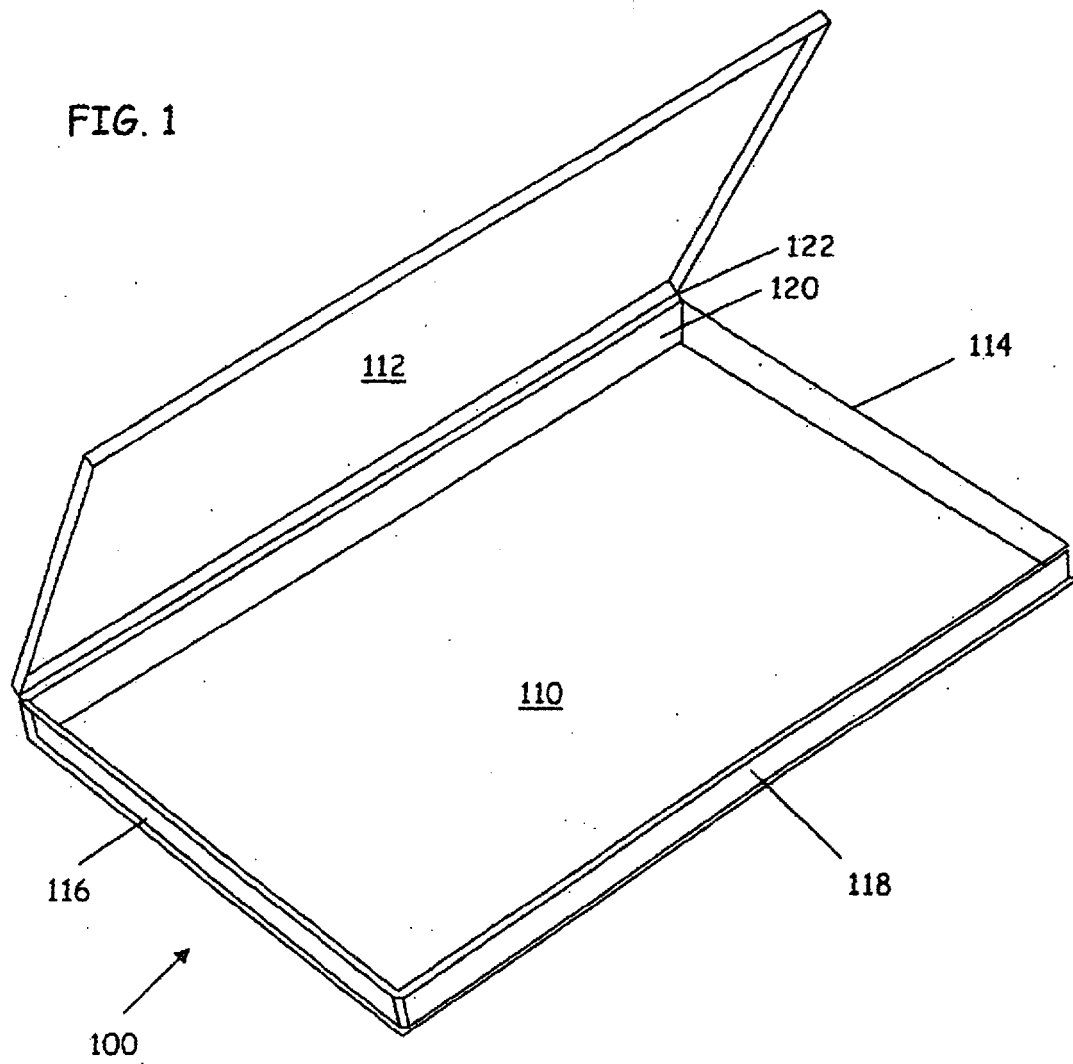


FIG. 2

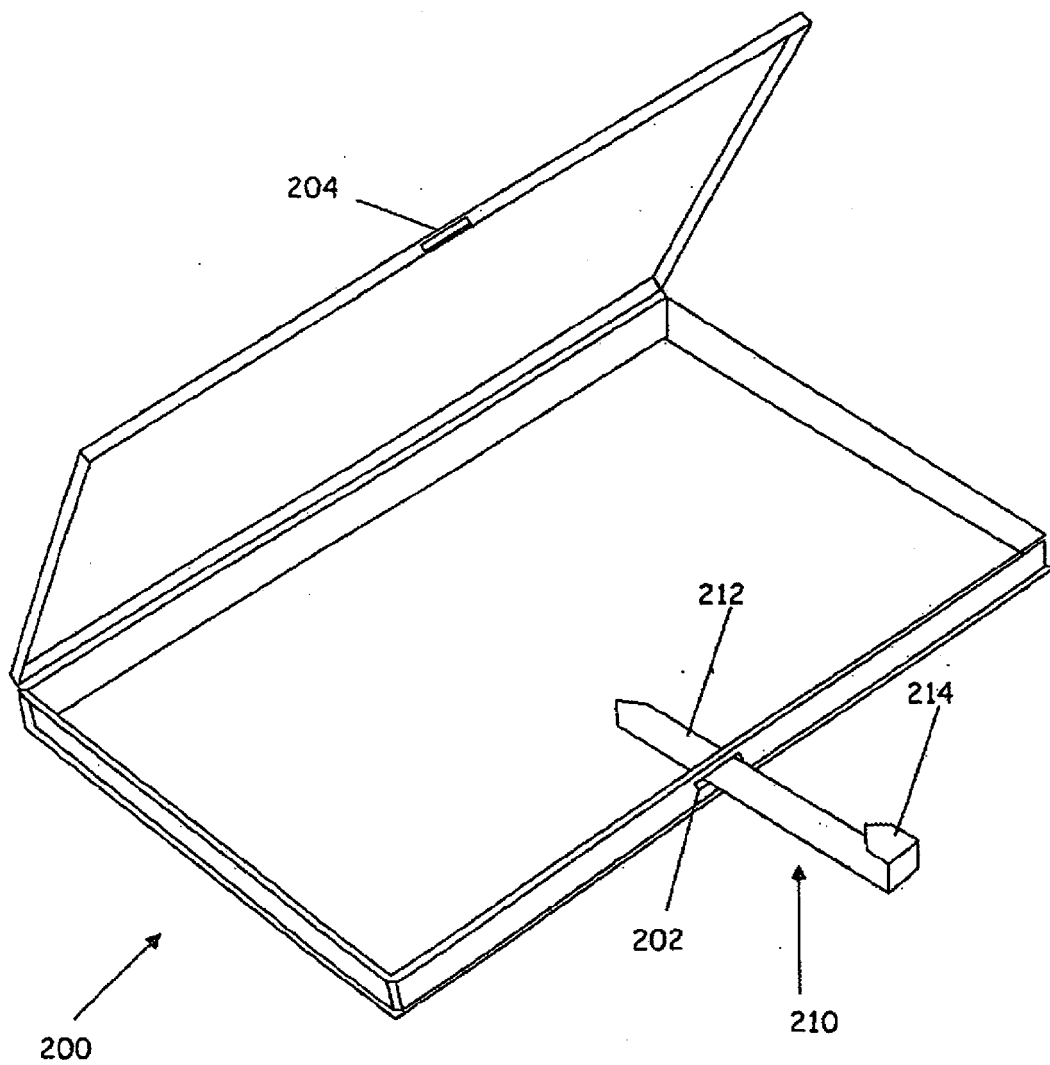


FIG. 3

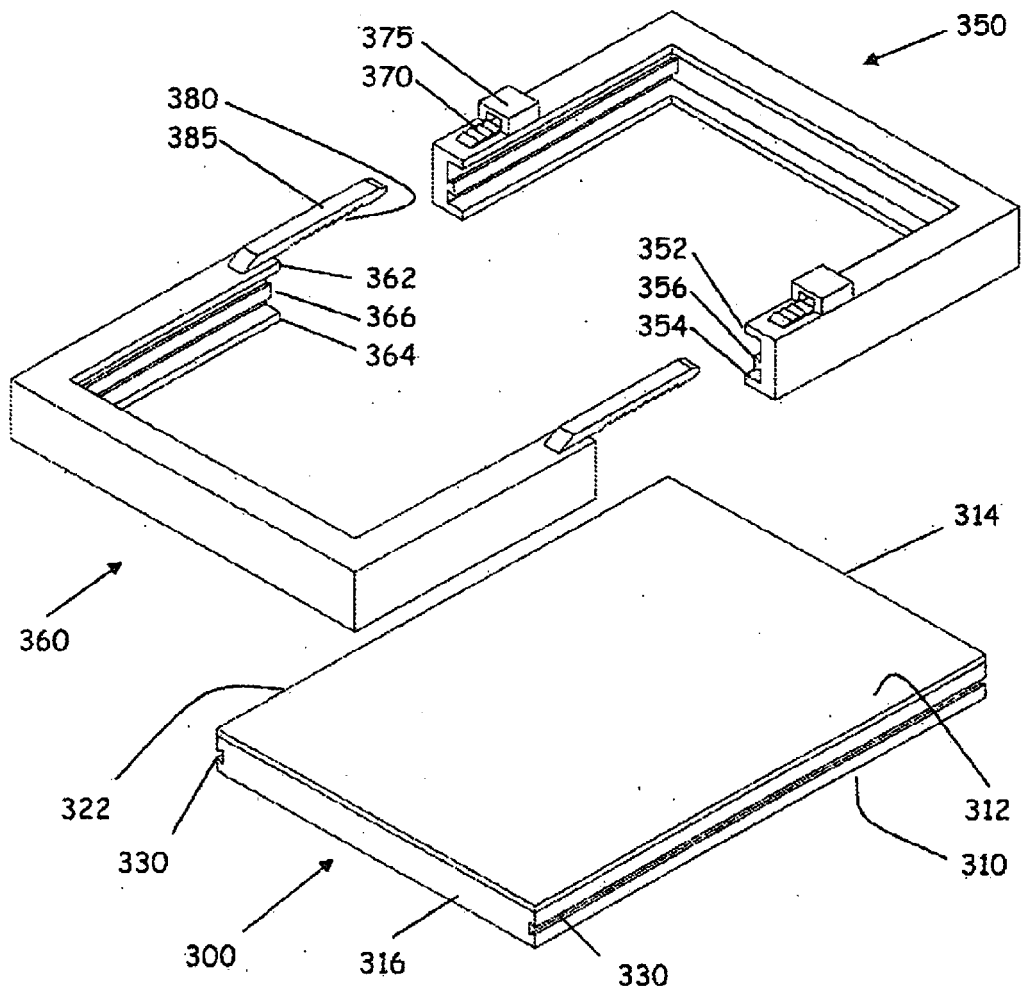
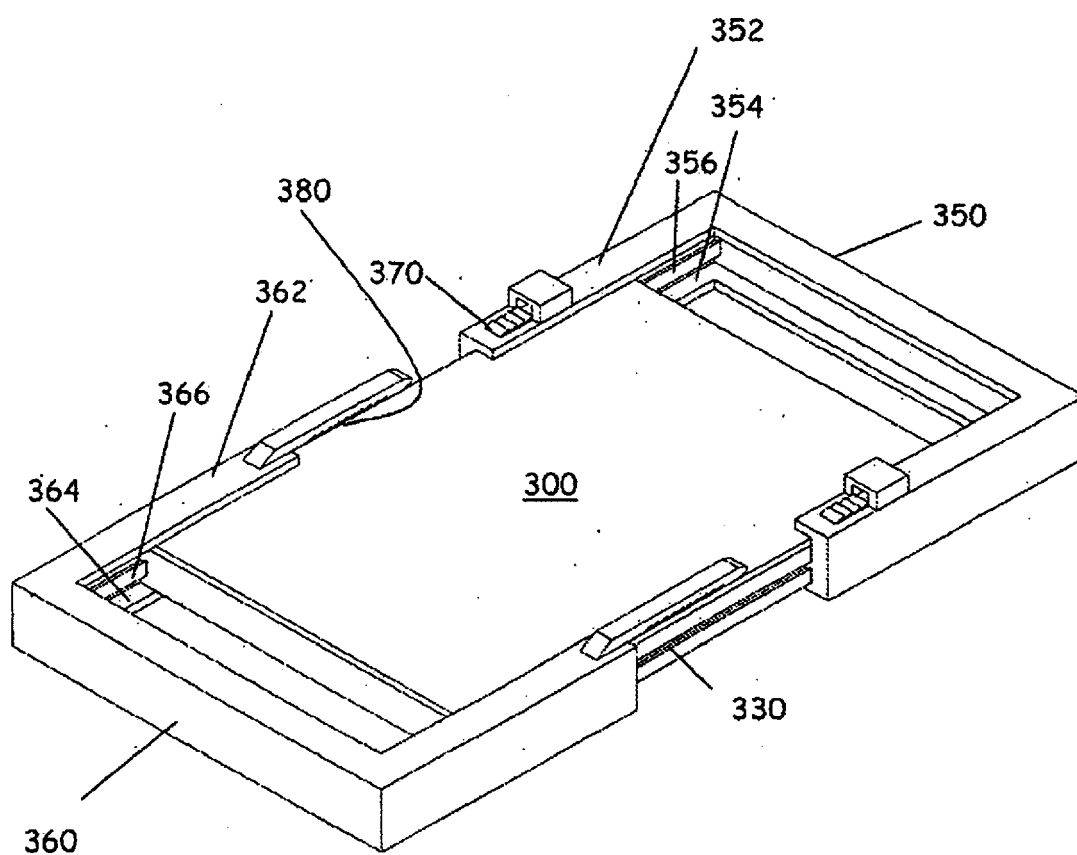
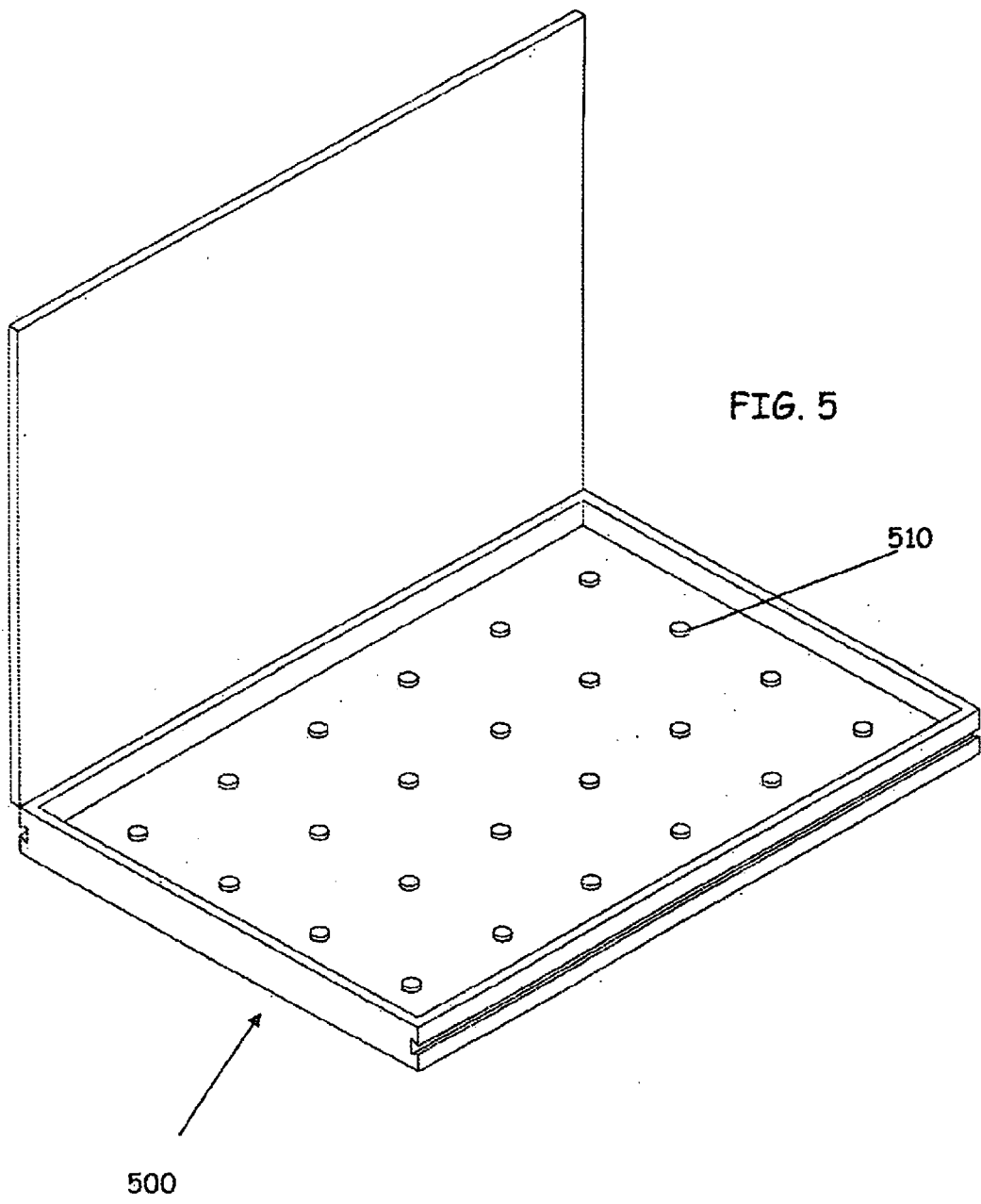
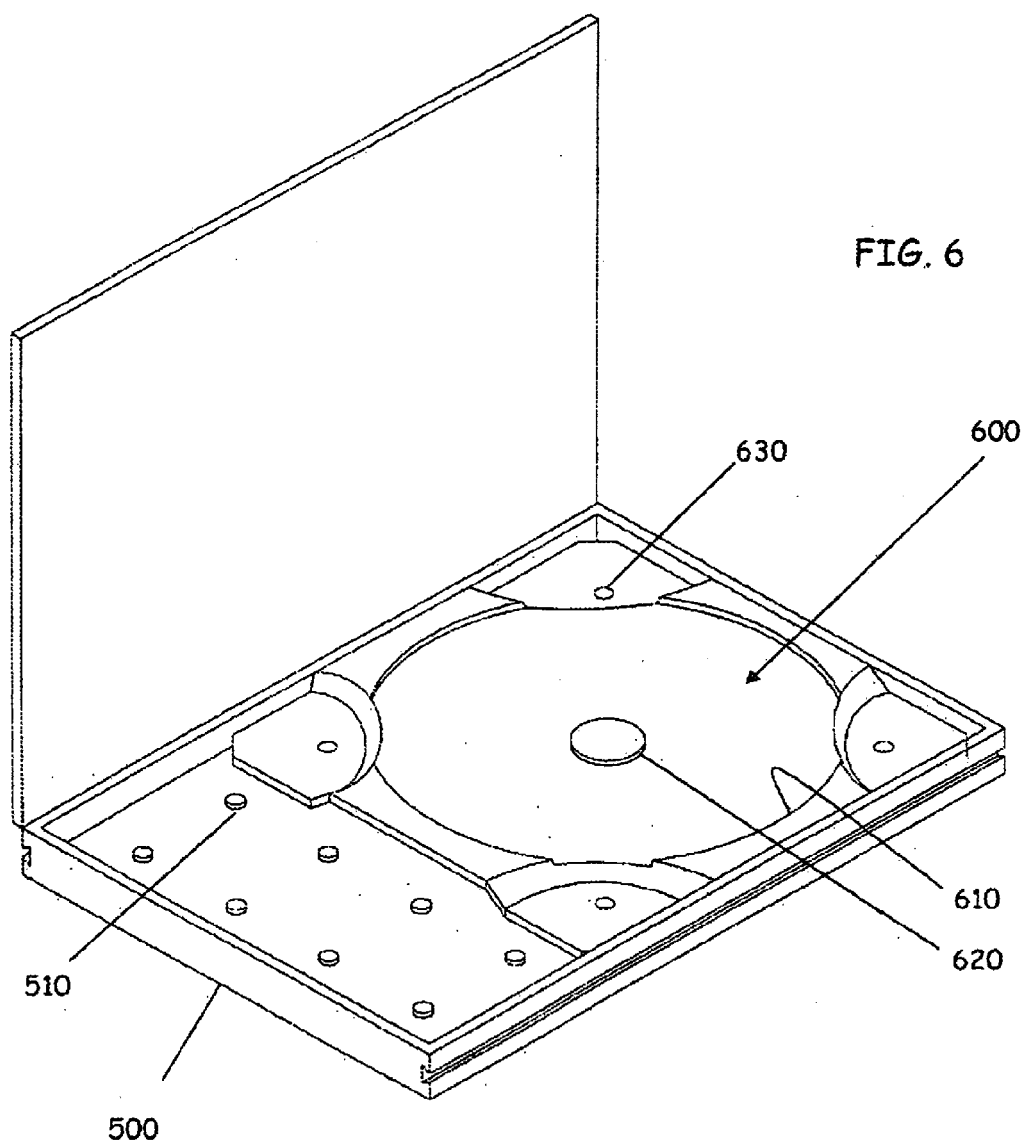


FIG. 4







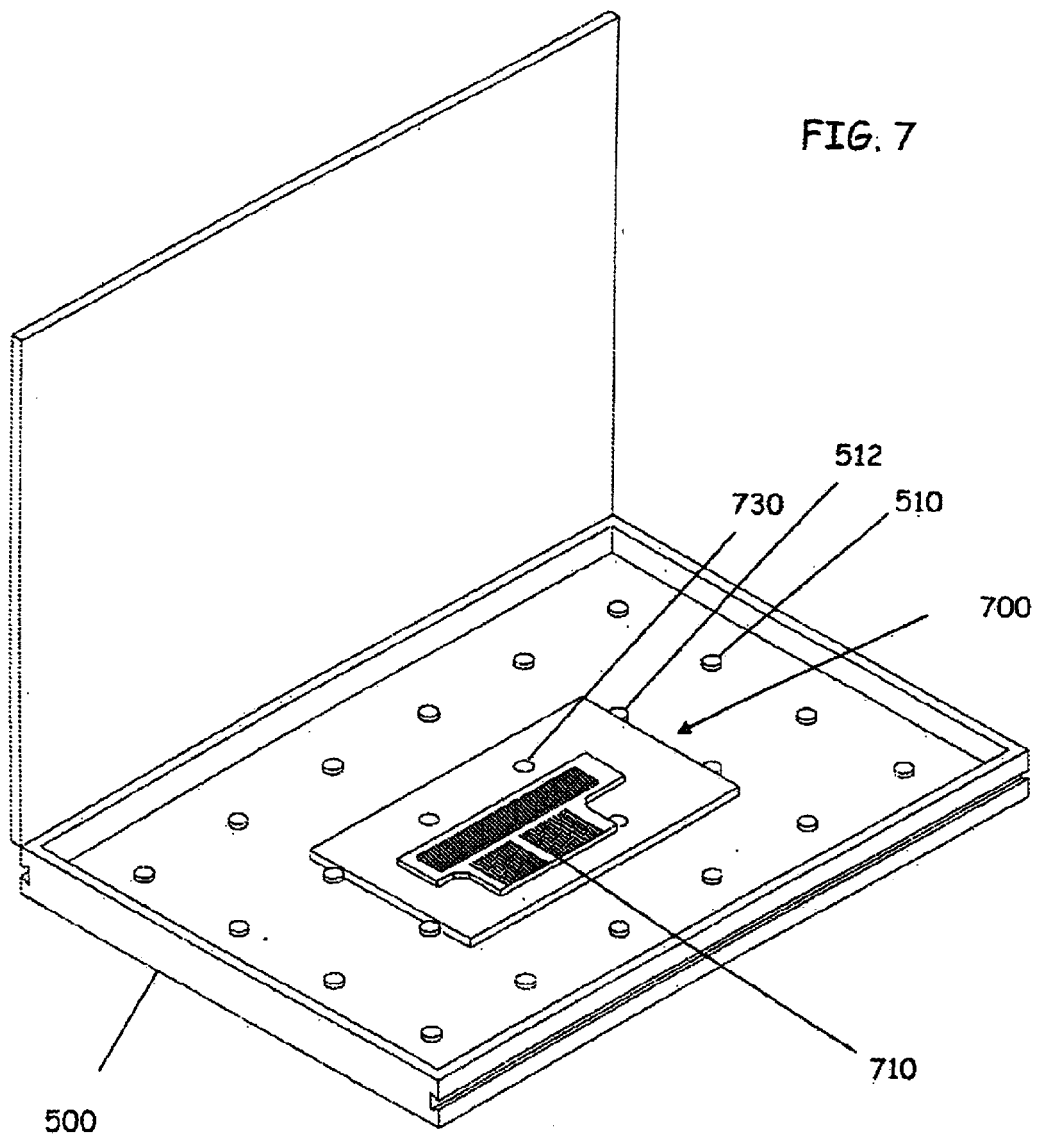


FIG. 8

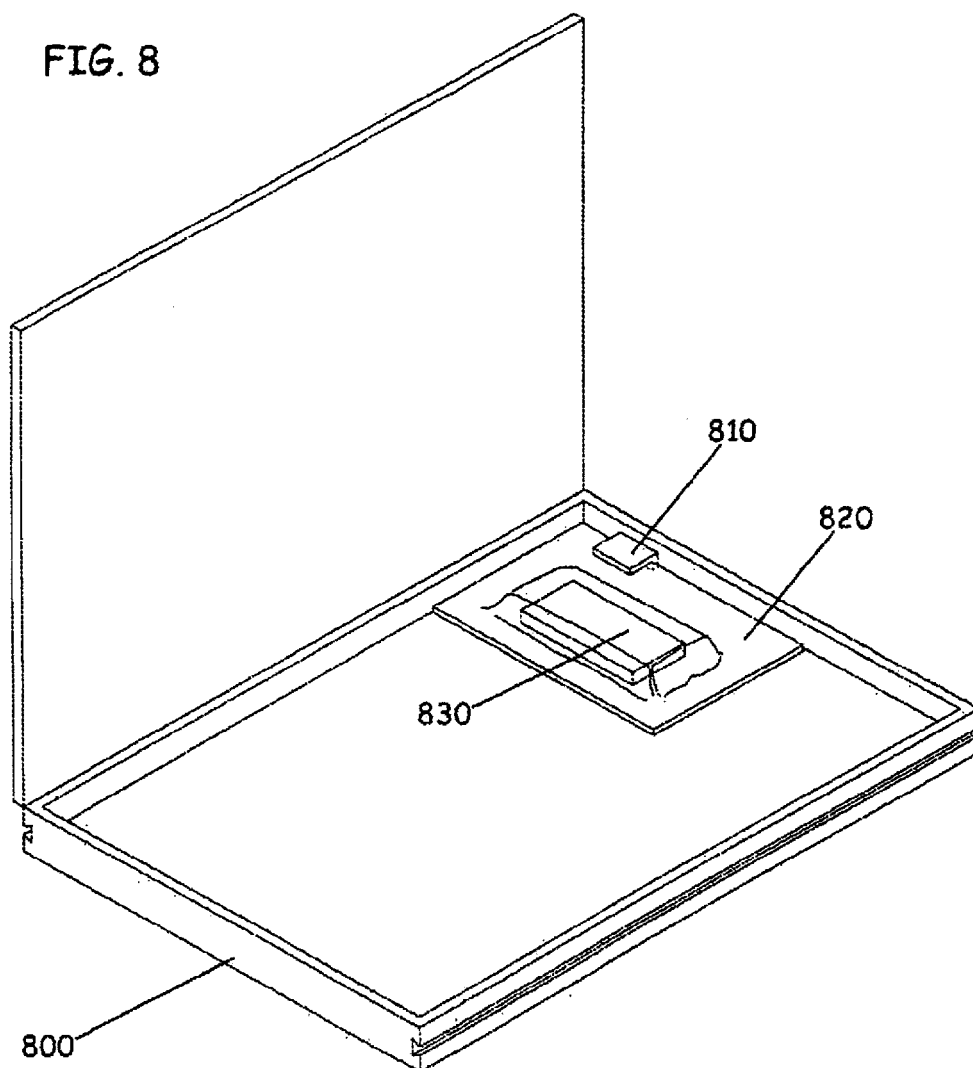
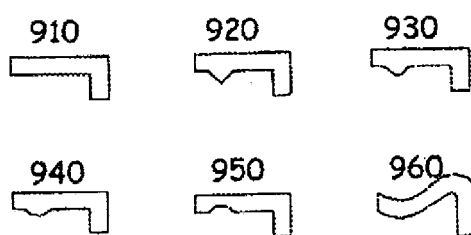


FIG. 9



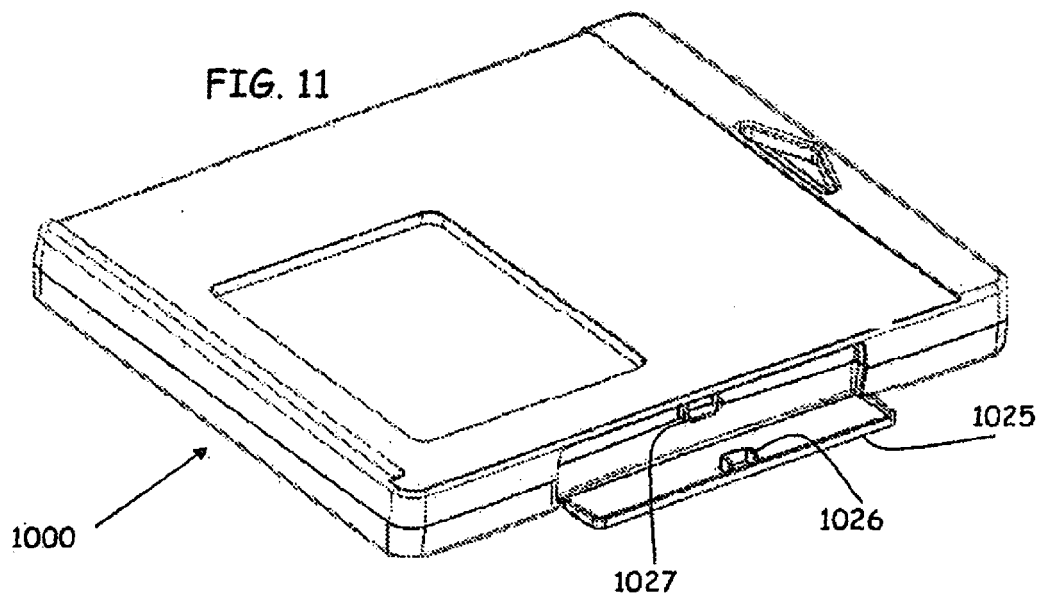
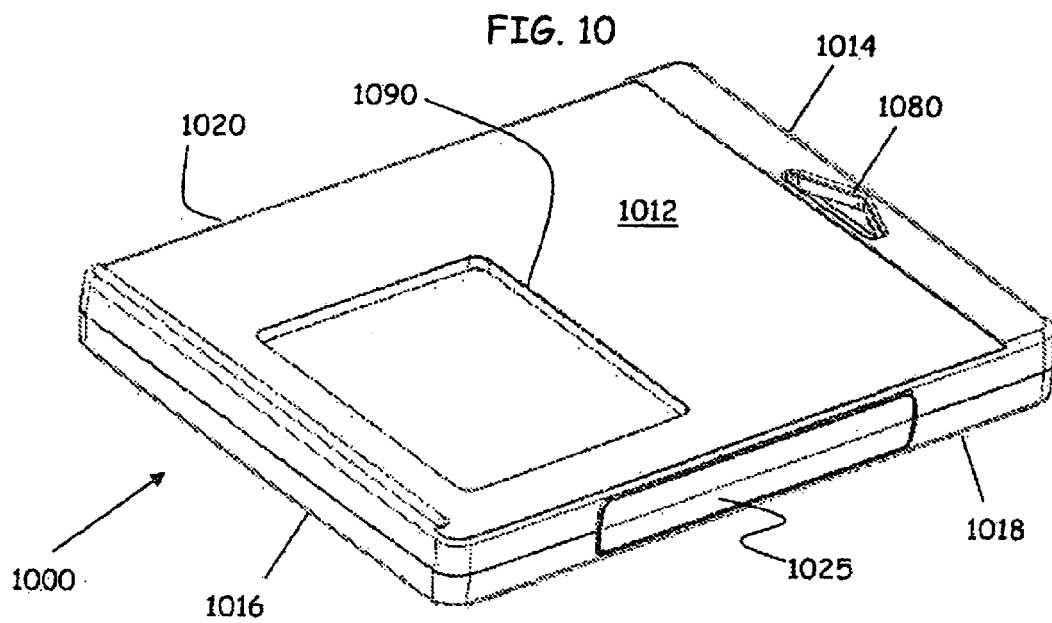


FIG. 12

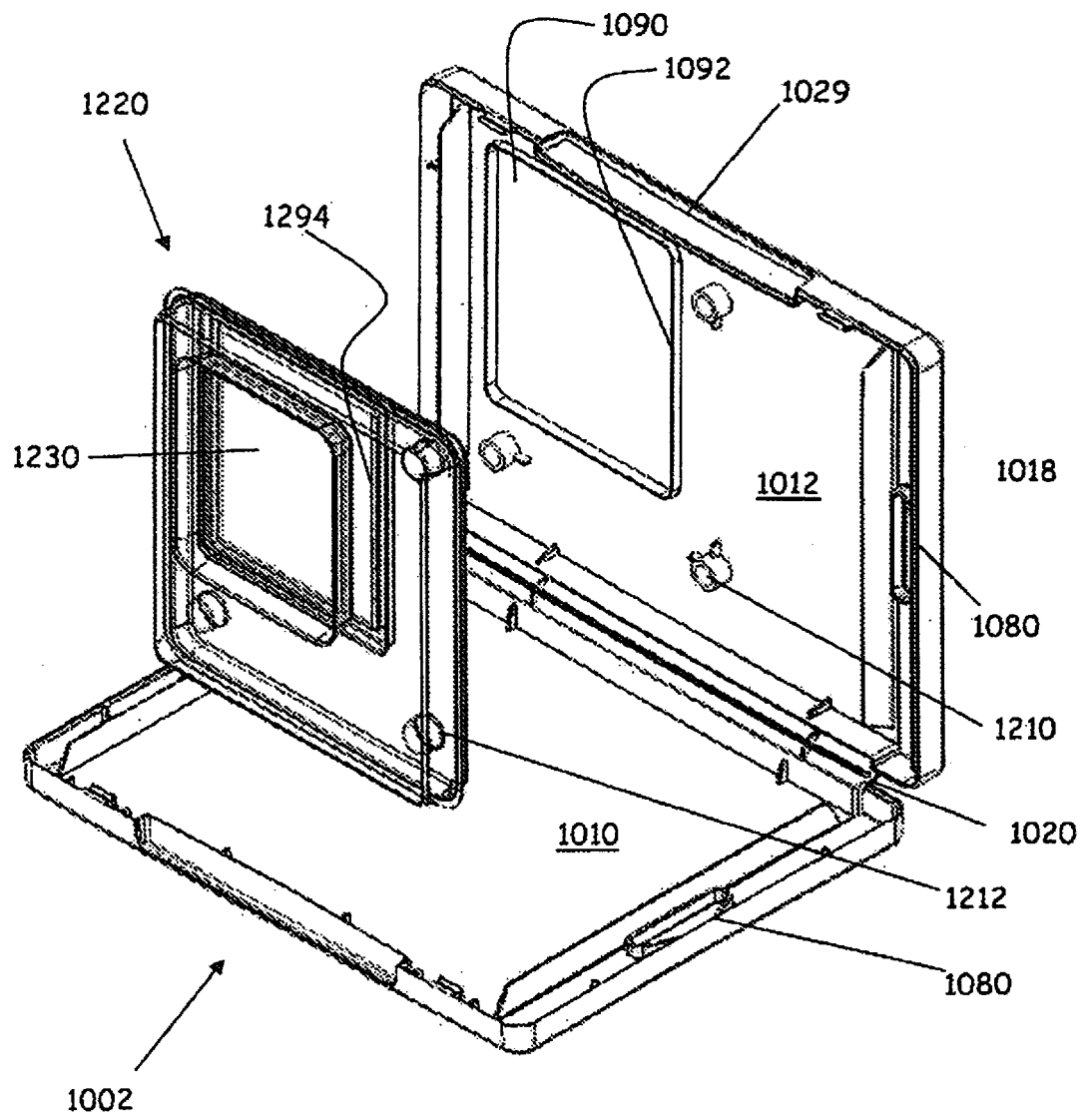
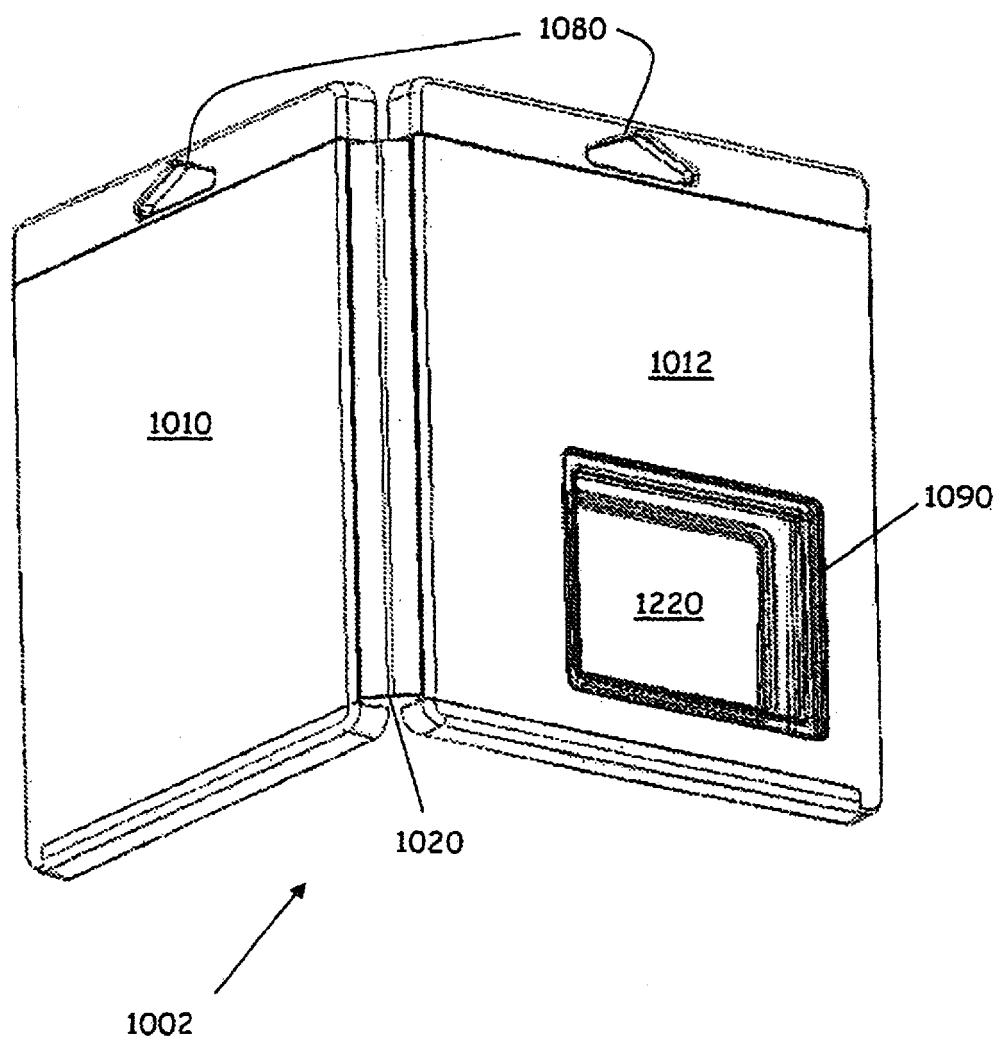


FIG. 13





EUROPEAN SEARCH REPORT

 Application Number
 EP 10 17 3129

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Place of search The Hague		Date of completion of the search 10 September 2010	Examiner Bitton, Alexandre
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 10 17 3129

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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