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(54) MEDIA STORAGE AND ORGANIZATION **SYSTEM**

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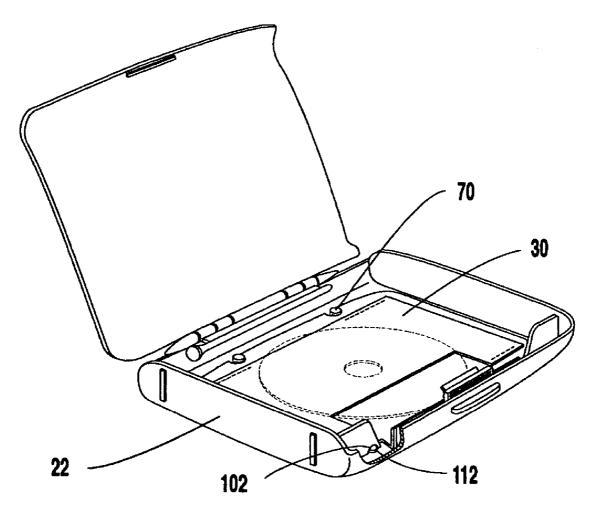
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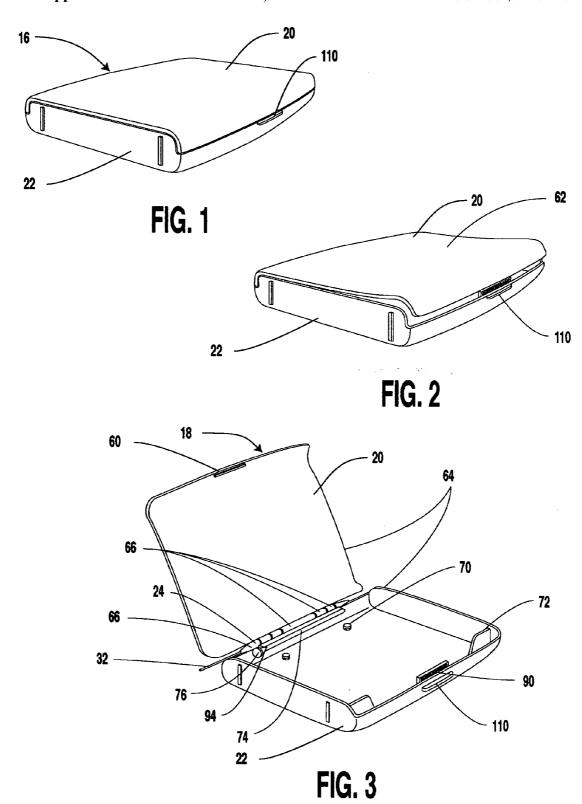
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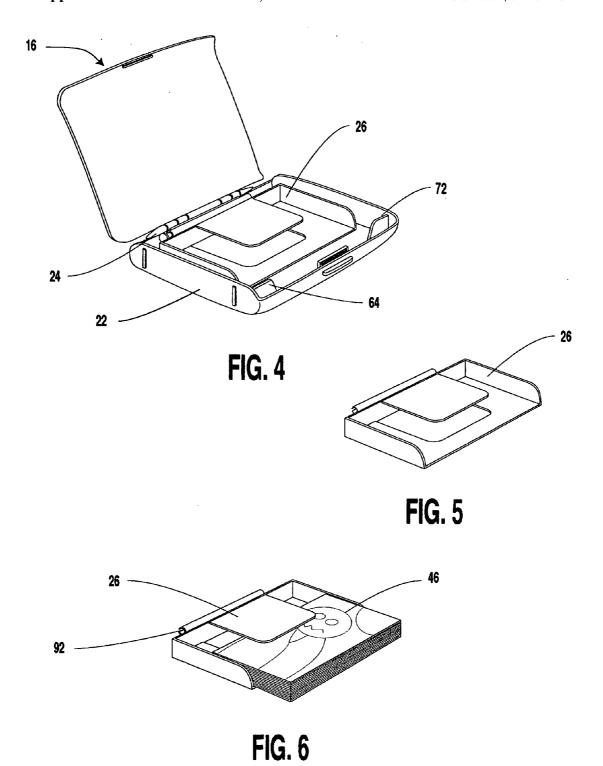
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ABSTRACT (57)

A media storage and organization system is comprised of a durable enclosure and a plurality of inserts for holding photographs, negatives, digital computer disks, memory cards, slides, business cards, a calendar, and the like. Inserts are attached to the enclosure by means of a mounting rail, which is integral to a hinge used for connecting a top and bottom covers that form said enclosure.







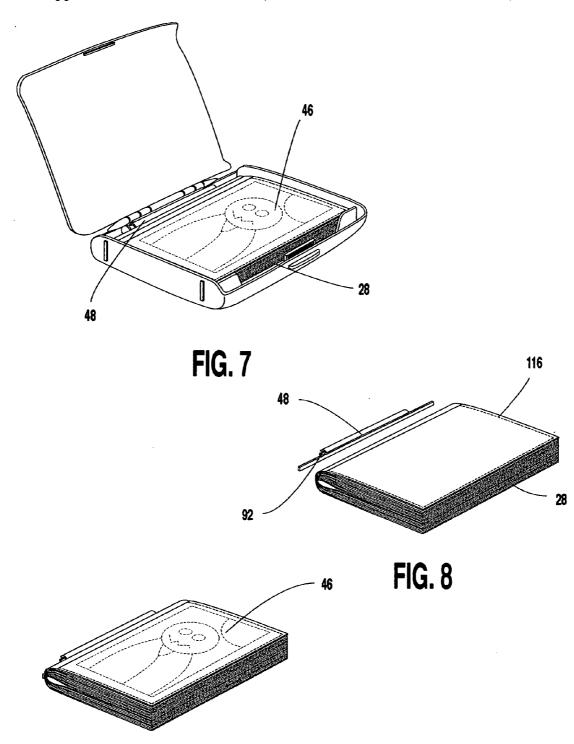


FIG. 9

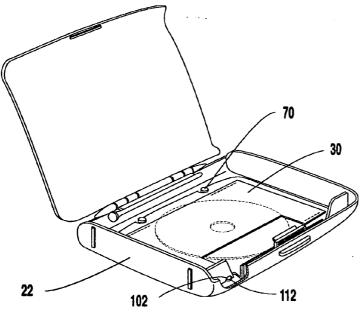


FIG. 10

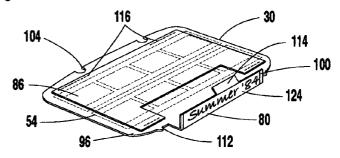


FIG. 11

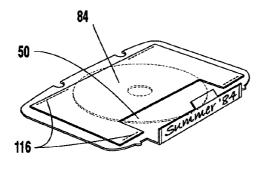


FIG. 12

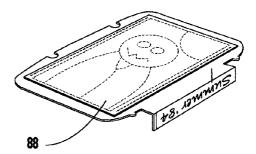


FIG. 13

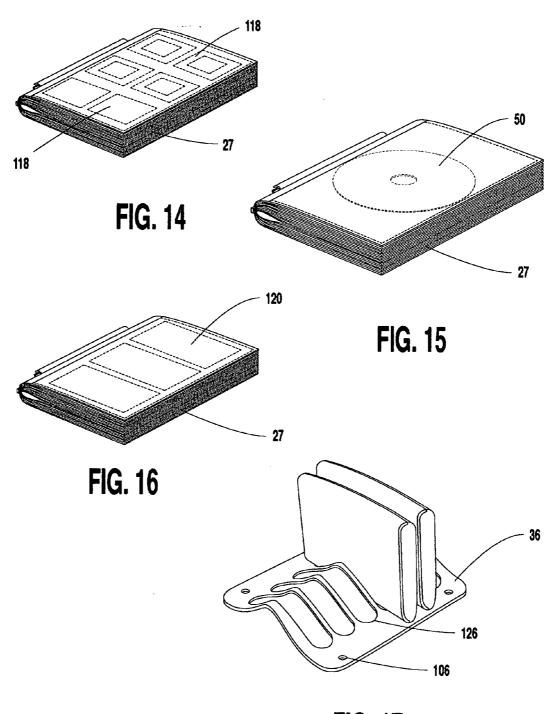


FIG. 17

MEDIA STORAGE AND ORGANIZATION SYSTEM

[0001] CROSS-REFERENCE TO RELATED CASES

[0002] This patent claims priority of PPA Serial Number: 60/476,043 filed Jun. 04, 2003

[0003] BACKGROUND

[0004] 1. FIELD OF THE INVENTION

[0005] The present invention generally relates to storage and organization of media including photographs, negatives, compact disks, digital video disks, slides, memory cards, business cards, etc.

[0006] 2. DESCRIPTION OF PRIOR ART

[0007] Media, such as photographs, digital media disks, slides, memory cards, and business cards, are often marketed using packaging which organizes individual units. Users of such media need to organize and store multiple media within the same collection.

[0008] As an example, film-based photographs are generally developed and printed at a photo-processing vendor; or, in the case of a digital photography, by a consumer directly using a computer, a printer, and a compact disk burner. Photographs are stored and organized by a variety of existing systems; these include the vendor's packaging, photo albums, and photo boxes.

[0009] The most common method of storing photographs is using the vendor's packing. This generally consists of a paper or thin cardboard envelope in which the photographs, an index print, negatives, and a compact disk are stored. The envelope often has a label area on which to write information corresponding to the contents. This envelope, while common, does little to help consumers organize photographs and offers little protection from damage.

[0010] Photo albums are excellent for displaying images but often do not solve the problem of archiving negatives or compact disks. Photo boxes, similar in size and capacity to a shoe box, are appropriate for storing photographs but the ability to organize, label, and retrieve specific items is limited. Thus, while the topic of photo organization and storage has been addressed, no system has been created which offers a complete solution.

[0011] Furthermore, users of the other media mentioned above have similar needs for organization. They need a system of storage which accommodates a wide range of media and the flexibility to customize it for each of these media.

[0012] The French company Posso Systems makes a media storage system which organizes media using a series of uniform storage containers. The system, sold under he trademark Media Box Space Saver, has dividers that enable 23 single CD's, 11 double CD's in their plastic box, or 100 single CD's in a sleeve to be stored. The Media Box Space Saver system can be stacked and arranged in order to address media, audio, video and computing filing needs.

[0013] Advantus Corporation makes a Photo Organization System under the name KeepSafe® which uses polypropylene envelopes to store photographs and negatives. The KeepSafe® system also includes cases for storage of multiple envelopes. The Advantus system does not specify storage of a CD with the photographs and does not provide

options for storing other media. The Advantus system does provide a label for the envelopes in the form of an adhesivebacked paper label.

[0014] CD Projects, a US company, makes a system which works on guided rails; users can organize and reorganize CDs between portable units, without ever removing them from their protective sleeves. While the system has flexibility, it does not provide inserts for storing other media.

[0015] Seifert et al. (US Pat. No. 5,725,098; issued Mar. 10, 1998) describe a similar system of media organization which uses a durable case to which several inserts can be attached. Seifert's system uses a two mounting blocks, located at each end of a seam created by two covers of an enclosure, for attaching and detaching inserts. However, Seifert's method of mounting creates potential binding and alignment problems.

[0016] Kim et al. (US Pat. No. 6,239,968; issued May 29, 2001) disclose a case specifically for an electronic organizer using a mounting rail. The mounting rail is attached to the hinge which holds together two covers for protecting the organizer. The case is limited to storing only an electronic organizer and does not store any other items.

[0017] Users need for a system of organizing media which gives them the ability to both organize and to have flexibility within the organizational system. Again using the example of photography, users have no system which (a) stores photographs, negatives, a compact disk, and an index print in a single archived location, (b) combines negatives, a compact disk, and an index print in a single labeled container, (c) reorganizes photographs and media cards within a variety of storage options, and (d) offers the flexibility to use elements of the system to store other types of media like disks, slides, memory cards, and business cards.

OBJECTS AND ADVANTAGES

[0018] Accordingly, several advantages of the present invention are:

[0019] (a) to provide an improved media storage system,

[0020] (b) to provide a system which can store photographs, negatives, compact disks, digital video disks, slides, memory cards, and business cards in an organized manner in an enclosure;

[0021] (c) to provide a system which can store additional supplemental items to media, for example, photographic negatives, index prints, labels, and compact disks) within an enclosure;

[0022] (d) to provide a system which can customize inserts and allows different media to be stored in different methods within an enclosure;

[0023] (e) to provide a system which can retain within, or without, a label visible from the exterior of an enclosure;

[0024] (f) to provide storage racks and other storage methods for multiple enclosures.

[0025] Further advantages of the invention will become apparent from a consideration of the drawings and ensuing description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] FIG. 1 is an isometric view of a media storage case according to the invention in a closed position.

[0027] FIG. 2 is an isometric view of the case in a latch-release position.

[0028] FIG. 3 is an isometric assembly view of the case in an open position with an axle shown partially inserted into the hinge.

[0029] FIG. 4 is an isometric view of the case in the open position with a tray insert.

[0030] FIG. 5 is an isometric view of the tray insert.

[0031] FIG. 6 is an isometric view of the tray insert with photographs inserted.

[0032] FIG. 7 is an isometric view of the case in the open position with an album pages insert.

[0033] FIG. 8 is an isometric exploded view of the album pages insert.

[0034] FIG. 9 is an isometric assembly view of the album pages insert.

[0035] FIG. 10 is an isometric view of the case in the open position with a media card inserted.

[0036] FIG. 11 is an isometric view of the media card showing the top with negatives inserted.

[0037] FIG. 12 is an isometric view of the media card showing the top with digital media disk inserted.

[0038] FIG. 13 is an isometric view of the media card showing the bottom with an index print pocket.

[0039] FIG. 14 is an isometric assembly view of a slide storage insert.

[0040] FIG. 15 is an isometric assembly view of a digital media disk storage insert.

[0041] FIG. 16 is an isometric assembly view of a business card storage insert.

[0042] FIG. 17 is an isometric view of a storage rack with an enclosure inserted.

REFERENCE NUMERALS						
16	Enclosure	18	Case			
20	Тор	22	Bottom			
24	Hinge	26	Tray			
27	Album	28	Pages			
30	Media Card	32	Axle			
36	Storage Rack	46	Photographs			
48	Binder	50	Digital Media Disk			
52	Index Print	54	Negatives			
60	Top Latch	62	Curved Surface			
66	Hinge knuckle	70	Attachment Base			
72	Retention Rib	74	Mounting Rail			
76	Mounting Rail Base	80	Label			
84	Digital Media Disk Pocket	86	Negative Pocket			
88	Index Print Pocket	90	Bottom Latch			
92	C-channel	94	Detent			
96	Rigid Card	100	Protrusion			
102	Attachment Top	104	Notch			
106	Hole	110	Release Button			
112	Tab	114	Handle			

-continued

REFERENCE NUMERALS								
	Weld Business Card Label Pocket	122	Slides Memory Card Slot					

SUMMARY

[0043] In accordance with the present invention a storage and organization system comprises an enclosure that incorporates various inserts for media such as photographs, digital computer disks, negatives, slides, business cards, and the like as well as storage racks for organizing multiple enclosures.

DETAILED DESCRIPTION

[0044] Overview—FIGS. 3, 4, 6, 7, 8, 11, 12, 14, 15, 16, and 17

[0045] A typical embodiment of the present invention is illustrated in FIGS. 3, 4, and 7, which show an oenclosure 16 used for holding and organizing media including but not limited to photographs as shown in the present embodiment. An enclosure 16 generally refers to the assembly of a case 18, a media card 30, and one of either a tray 26 or an album 27. Case 18 is an assembly of a top 20, a bottom 22, a hinge 24, and an axle 32. Case 18 is removably attached to either tray 26 or album 27. Album 27 is configured to store a variety of media including but not limited to individual or a combination of photographs 26, negatives 54, digital media disks 50, slides 118, or business cards 120. Media card 30 is removably attached to case 18; in the present embodiment it is attached to bottom 22. Media card 30 includes a label 80, a digital media disk pocket 84, a negative pocket 86, and an index card pocket 88.

[0046] Tray 26 is constructed such that it retains multiple individual card-type media, including photographs 46 and is generally attached to case 18 by means of hinge 24 as shown in FIG. 6. Album 27 is constructed of pages 28 attached to a binder 48, which generally attaches to case 18 by means of hinge 24 as shown in FIG. 8.

[0047] Multiple enclosures 16 can be organized by means of a storage rack 36 as shown in FIG. 17.

[0048] Case—FIGS. 1 to 4

[0049] Referring to FIG. 3, case 18 is assembled of top 20, bottom 22, and hinge 24, attached to each other by axle 32. Axle 32 passes through hinge knuckles 66 on each of the assembled components. The current embodiment indicates two hinge knuckles 66 on top 20, two hinge knuckles 66 on bottom 22, and three hinge knuckles 66 on hinge 24 such that top 20 and bottom 22 can open at least 180 degrees.

[0050] Top 20 is generally constructed from injection molded plastic material and forms a cavity when joined by means of hinge 24 and axle 32 to bottom 22. In FIG. 3, top 20 and bottom 22 are secured in the closed configuration with a top latch 60 and a bottom latch 90 which overlap and interfere as they rotate on axle 32. The overlapping interference is constructed of a female cavity on either the top latch 60 or the bottom latch 90, and a male protrusion, small

enough to fit within the female cavity, on the corresponding other part. Case 18 is opened by pressing on one of the parts, which can include a release button 110, such that the material deflects and removes the interference from between the two parts, thus allowing the enclosure to open.

[0051] Referring to FIG. 2, top 20 and bottom 22 are constructed with a curved surface 62, which creates a positively loaded bias towards the opening of the latch between top 20 and bottom 22. When the overlapping interference is removed as indicated above, the bias of curved surface 62 opens the case partially. The current embodiment allows a user to open case 18 by using only one hand by pressing on release button 110.

[0052] Referring to FIGS. 4 and 6, bottom 22 has a retention rib 72 which acts to prevent photographs 46 from sliding out of tray 26 when enclosure 16 is closed. Retention rib 72 is distant from the axis of hinge 24 such that enclosure 16 closes properly when either tray 26 is filled with photographs 46 or album 27 is contained with case 18.

[0053] Tray and Album—FIGS. 3 to 9. 14 to 16

[0054] Tray 26 is an enclosure for storing photographs 46 and is removably attached to case 18. In FIG. 6, tray 26 stores photographs 46 in a stack by providing a rectangular enclosure with five closed sides and a sixth open side for access. Also referring to FIG. 4, when tray 26 with photographs 46 is captured within case 18, the sixth side of the rectangular enclosure is formed by retention ribs 72 on bottom 22. The retention rib 72 extends from the bottom 22 such that it is proximate to top 20 when case 18 is closed. Thus, tray 26 in combination with case 18 form an enclosure which secures photographs 46 and prevents them from sliding out of tray 26. The enclosure stores single or multiple photographs 46. Tray 26 is constructed to allow for simplification in the molding process—specifically no additional core is needed to form the cavity for holding photographs 46. Other alternatives also exist for creating such a cavity.

[0055] The size of tray 26 is determined by photographic media commonly available. The current embodiment envisions an oversized cavity of 100 mm by 150 mm. The number of photographs 46 can vary as well and the current embodiment can have a maximum cavity thickness equal to the stacking of approximately 52 photographs.

[0056] Tray 26 is removably attached to the case 18 by hinge 24. In FIG, 6, tray 26 integrates a C-channel 92, a tube with a longitudinal section less that 180 degrees removed. One end of C-channel 92 is closed and the other end open. Hinge 24 has a mounting rail 74 whose outer diameter roughly corresponds to the inner diameter of C-channel 92 and, at one end, a mounting rail base 76. C-channel 92 slides over mounting rail 74, shown in FIG. 3, as the primary means of removably attaching the parts together. Mounting rail 74 is attached to hinge 24 such that it does not interfere with C-channel 92 sliding over mounting rail 74. As shown in FIG. 3 and 6, it is possible to hinder the accidental detachment of C-channel 92 from mounting rail 74 by means of a detent 94 or other suitable method of providing frictional interference between the parts. Album 27 constructed of pages 28 and binder 48. In FIG. 8, pages 28 are generally constructed as multiple pages, each pocket sized for the storage and viewing of an individual photograph in the current embodiment. Each pocket is sealed on three sides with an opening for inserting the photograph. The individual pages are attached together to form a book bound in the center and an individual page can be turned to view an individual photograph. Album 27 preferably has a sandwich construction and is die-cut for providing pockets and binding the book. A variety of manufacturing techniques exist for accomplishing this, the most common being sheet plastic material which is heat or ultrasonically welded together at a weld 116 and die-cut to the appropriate size.

[0057] Again in FIG. 8, one or more pages 28 are attached to binder 48 as an assembly by established manufacturing methods, in the current embodiment by means of ultrasonic welding or heat staking. Binder 48 has C-channel 92 similar to tray 26.

[0058] Referring to FIGS. 4 and 7, enclosure 16 can be made of case 18 coupled with either tray 26 or album 27. As enclosure 16 will use the same manufactured case 18, the dimensions and specifications of tray 26 and album 27 are necessarily co-dependent, specifically the maximum size dimensions, the attachment method to hinge 24, and the placement of retention ribs 72. As shown in FIGS. 14, 15, and 16, album 27 can be manufactured in other embodiments to hold negatives 54, digital media disks 50, slides 118, memory cards 122, or business cards 120.

[0059] Media Card—FIGS. 10-13

[0060] Referring to FIGS. 11 and 13, media card 30 incorporates a label 80, a digital media disk pocket 84, a negative pocket 86, and an index card pocket 88. Media card 30 has a sandwich construction commonly used in manufacturing. At the center of the construction is a rigid card 96 which can be constructed of sheet plastic or paper material. The outer planes of the sandwich construction are negative pocket 86 and index print pocket 88, depicted as one on top and one on the bottom. Pockets can be formed by sealing on two or three sides or by means of single points at necessary locations to secure media. Media card 30 is constructed using thermoform plastics and heat or ultrasonic welding techniques combined with die-cutting. Pockets can be formed alternatively in a variety of combinations on the top and/or bottom surface of media card 30. Pockets can also be combined to contain more than one article or medium.

[0061] Referring to FIG. 11, label 80 is constructed of a material upon which common marking media can write, generally paper in the current embodiment. There are a variety of ways that label 80 can be attached to media card 30. A label pocket 124 is open on one or two sides into which a paper card can be removably inserted. Rigid card 96 includes a protrusion 100 which acts to guide the placement of label 80, specifically when media card 30 is inserted into case 18. Protrusion 100 enables label pocket 124 to bend such that it is coplanar with the corresponding side wall of either top 20 or bottom 22. By orienting label 80 coplanar to the side wall, label 80 can more easily be read from the exterior of case 18. Alternatively, protrusion 100 can be manufactured of a material that can be marked with common media to make label 80 visible from the exterior of case 18.

[0062] Media card 30 (FIG. 10) integrates several features for securing it to case 18. An attachment base 70 and an attachment top 102 are included for this purpose. Media card 30 can be attached to either top 20 or bottom 22, the current configuration showing it on bottom 22. Media card 30 has a

notch 104 which corresponds in size to attachment base 70 and a tab 112 which corresponds in size to attachment top 102. With media card 30 coplanar and in contact with bottom 22, notch 104 is inserted into attachment base 70. Tab 112 is then inserted into attachment top 102 to create an interference fit. By such a method of insertion, media card 30 is captured by bottom 22 at attachment base 70 and attachment top 102. Media card 30 is removed from bottom 22 by a handle 114 which, when pulled vertically, removes tab 112 from attachment top 102 and, subsequently, notch 104 from attachment base 70.

[0063] Storage Rack System—FIG. 17

[0064] Multiple enclosures 16 can be organized using a variety of storage systems. FIG. 17 shows multiple enclosures 16 stored in a storage rack 36. Enclosure 16 is oriented in storage rack 36 such that label 80 is oriented outwards. Enclosure 16 attaches to storage rack 36 by means of simple placement in a slot 126, and held in place by friction. Storage rack 36 can be used on a flat planar surface like a table or the bottom of a drawer, or can be attached to a vertical surface by means of a screw at a hole 106.

[0065] Alternative Embodiments

[0066] Alternatively, the system described above can use inserts, similar to tray 26 or album 27, modified to store specific media.

[0067] Case 18 can be realized in a variety of ways using alternative materials, opening and closing mechanisms, and form factors. Using specific injection-molding techniques, an alternative embodiment combines top 20 and bottom 22 into the same part using what is commonly referred to as a live hinge or film-joint hinge. Additionally, again with injection-molding techniques, any combination of two or more of hinge 24, top 20, and bottom 22 can be integrated into the same part and act substantially as case 18.

[0068] Tray 26, album 27, or any alternative embodiments can also be permanently attached to one of the top 20, bottom 22, or hinge 24.

[0069] Given the sensitivity of photographic materials, the system can be made using more expensive archival materials.

Operation

[0070] Enclosure 16 (FIG. 4) is opened and one or more photographs 46 are inserted as a stack into tray 26 in one configuration and individually in pages 28 in album 27 (FIG. 7). Photographic negatives 54 or digital media disk 50, used for backing-up digital photographs, are stored by removing media card 30 (FIG. 10) from bottom 22 and sliding them into negative pocket 86 (FIG. 11) or digital media disk pocket 84 (FIG. 12), respectively. Label 80 (FIG. 11) is removed from label pocket 124, written upon to identify the contents of enclosure 16, and replaced in label pocket 124. Index print pocket 88 (FIG. 13), open at one or more ends, can receive a photograph or an index print. Once populated, media card 30 is placed back in bottom 22 as described above.

[0071] Multiple enclosures 16 (FIG. 17) can be stored vertically or horizontally on a surface or using storage rack 36 to organize them in a drawer, on a table, or on a vertical surface like a wall. Inserts like tray 26 or album 27 can be

removed and used with other parts of a future furtherexpanded system of organization.

Conclusions, Ramifications, and Scope

[0072] It has been shown that enclosure 16 is an improved system for storing and organizing a plurality of media including photographic material, digital media disks, and business cards. By creating a case 18 to which different inserts can be attached including media card 30, tray 26, and album 27, which can be fabricated to store a plurality of media, a user can store multiple diverse items in a single flexible system. Additionally, a manufacturer need not create high investment tooling for case 18 for each new media being stored; rather, the manufacturer need only create new inserts to accommodate the storage of new media.

[0073] The system can store additional items supplemental to media (for example, for photographs it would be negatives, an index print, a label, and a compact disk) within enclosure 16. Enclosure 16 can be further stored in storage rack 36 to add additional functionality to the system.

[0074] Although the description above contains many specificities, these should not be construed as limiting the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this invention. While certain exemplary embodiments have been described above and shown in the accompanying drawings, such embodiments are merely illustrative of and are not restrictive to the broad invention, and that this invention not be limited to the specific constructions and arrangements shown and described, since various other modifications may occur to those ordinarily skilled in the art. For example, enclosure 16 might be manufactured as a single piece using a live hinge; a mechanical clip might be used to secure tray 26 or album 27 to hinge 24; tray 26 or album 27 might be permanently attached to enclosure 16 while still retaining the manufacturing flexibility of the storage system; etc.

[0075] Thus, the scope of the invention should be determined by the appended claims and their legal equivalents, rather than by the examples given.

1. A storage system comprising

- an enclosure comprising a plurality of sides, one of said sides being openable, so as to provide access to the interior of said enclosure, and closeable, so as to prevent access to said interior,
- a mechanism for attaching at least one insert within said enclosure,

one or more inserts, each for holding at least one medium selected from the group consisting of

- a label,
- an index print,
- a photograph,
- a digital computer disk,
- a photographic negative,
- a photographic slide,
- a business card,
- a memory card for a digital recording device,

- a one tape-based storage medium, and
- a sheet of paper.
- 2. The storage system of claim 1 wherein said insert is detachably attached to said enclosure.
- 3. The storage system in claim 1 wherein said enclosure has a label visible from the exterior.
- 4. The storage system in claim 1 further including a latch mechanism for holding said one of said sides closed, said one of said sides being biased to open when said latch mechanism is released.
- 5. The storage system as set forth in claim 1 wherein said mechanism is a mounting rail configured to allow said insert to be removably mounted to said mounting rail.
- 6. The storage system as set forth in claim 1 wherein said one side of said enclosure consists of a top cover and wherein said enclosure has a bottom cover and a hinge connecting said top and bottom covers.
- 7. The storage system as set forth in claim 8, wherein said hinge and at least one of said inserts are integral.
- **8**. The storage system as set forth in claim 1 wherein said insert is attached to said enclosure by multiple attachment points.
- 9. The storage system as set forth in claim 1 wherein said enclosure is substantially constructed of material which inhibits the transmission of ultraviolet light to the interior.
- **10.** A protective enclosure for use with inserts for media, comprising
 - a top cover,
 - a bottom cover,
 - a hinge operatively coupling said top cover to said bottom cover for allowing said top cover and said bottom cover to pivot about each other along an edge axis for opening and closing said protective enclosure,
 - a mounting rail coupled to said hinge for mounting inserts within said enclosure, and
 - at least one of said inserts for holding media said insert being attached to said mounting rail.

- 11. The protective enclosure of claim 10 wherein said media is selected from the group consisting of photographs, digital computer disks, photographic negatives, photographic slides, business cards, memory cards for a digital recording device, a calendar, and tape-based storage media.
- 12. The protective enclosure of claim 10 wherein said protective enclosure has a label visible from the exterior.
- 13. The storage system in claim 1 further including a latch mechanism for holding said one of said sides closed, said one of said sides being biased to open when said latch mechanism is released.
- 14. The protective enclosure of claim 10 wherein said mounting rail is configured to allow said insert to be removably mounted to said mounting rail.
- 15. The protective enclosure of claim 10 wherein said mounting rail is shorter than said hinge, and operable within an area as defined by said top cover and said bottom cover when in a closed configuration.
- 16. The protective enclosure of claim 10 wherein said mounting rail is an elongated generally cylindrical body situated a predetermined distance from said hinge axis, said mounting rail being pivotable about said hinge axis and limited only by an area defined by said top and bottom cover assemblies
- 17. The protective enclosure of claim 10, wherein said hinge further comprises a hinge pin, said hinge pin being inserted into hinge knuckles of said top cover, said bottom cover, and said mounting rail to operatively allow said top cover, said bottom cover, and said mounting rail to pivot about an axis defined by said hinge pin.
- 18. The protective enclosure of claim 10 wherein said hinge and said insert are integral.
- 19. The protective enclosure of claim 10 wherein said top and bottom covers are made from material which inhibits the transmission of ultraviolet light to the interior of said protective enclosure.

* * * * *