



US 20080142129A1

(19) **United States**

(12) **Patent Application Publication**
Reasner et al.

(10) **Pub. No.: US 2008/0142129 A1**

(43) **Pub. Date: Jun. 19, 2008**

(54) **AUTOMOBILE REMOTE AND KEY COVER**

(52) **U.S. Cl. 150/131; 29/428**

(76) **Inventors:** **Timothy Reasner**, Westlake Village, CA (US); **Eric Stevens**, Chatsworth, CA (US); **Lorraine M. Stevens**, Chatsworth, CA (US)

Correspondence Address:
Colin P. Abrahams
5850 Canoga Avenue, Suite 400
Woodland Hills, CA 91367

(21) **Appl. No.: 11/998,653**

(22) **Filed: Nov. 29, 2007**

Related U.S. Application Data

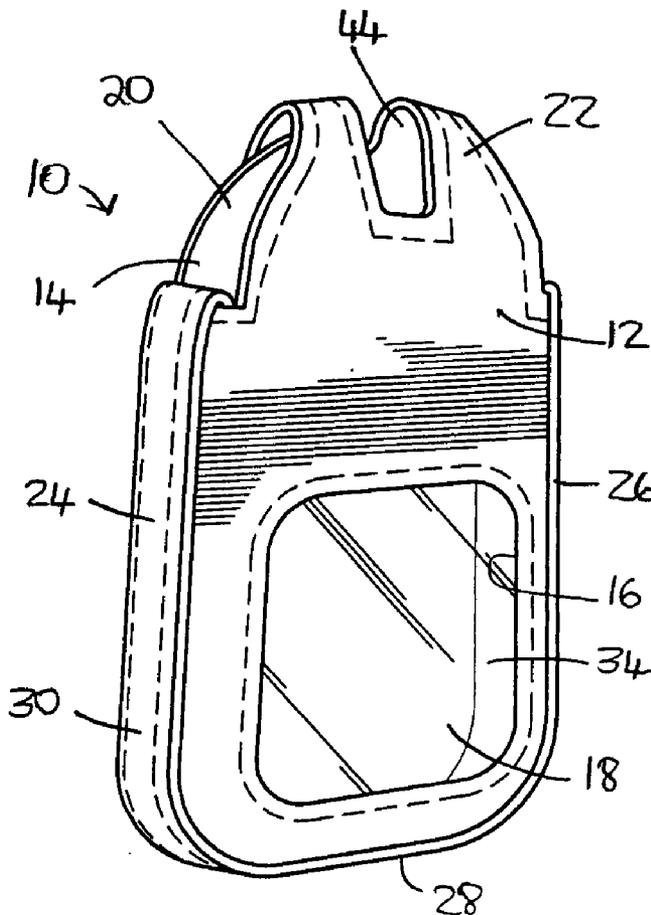
(60) **Provisional application No. 60/872,087, filed on Dec. 1, 2006.**

Publication Classification

(51) **Int. Cl.**
A45C 11/04 (2006.01)
A45C 11/06 (2006.01)

(57) **ABSTRACT**

A protective cover is provided for vehicle remote control device comprising a housing and a plurality of buttons on the surface of the housing which can be pressed for activating predetermined vehicle functions. The protective cover comprises an inner plastic sheath for fittingly surrounding the housing, the inner plastic sheath being comprised a relatively soft and pliable plastic material and having an opening therein through which the remote control device can be inserted. Further, an outer sheath substantially surrounds the inner plastic sheath. The outer sheath is comprised of a material selected for its ability to protect the remote control device. The outer sheath has an opening therein which substantially corresponds to the opening in the inner plastic sheath, and has at least one window therein, the window being located on the outer sheath so that the buttons can be seen through the window when the remote control device is inserted in the protective cover.



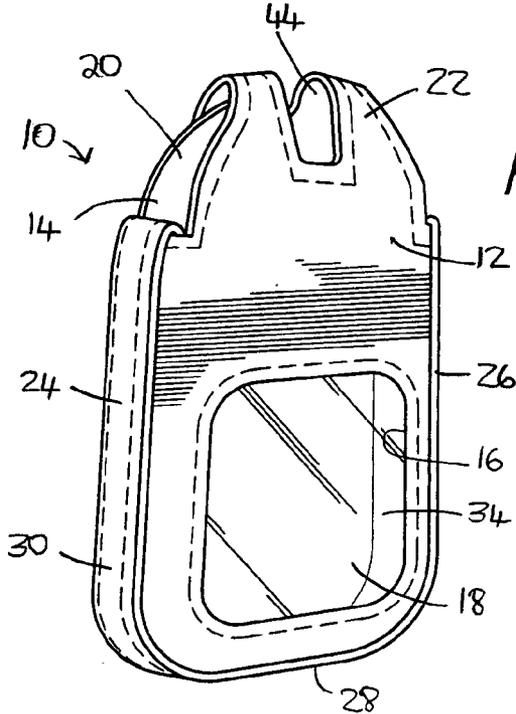


FIG. 1

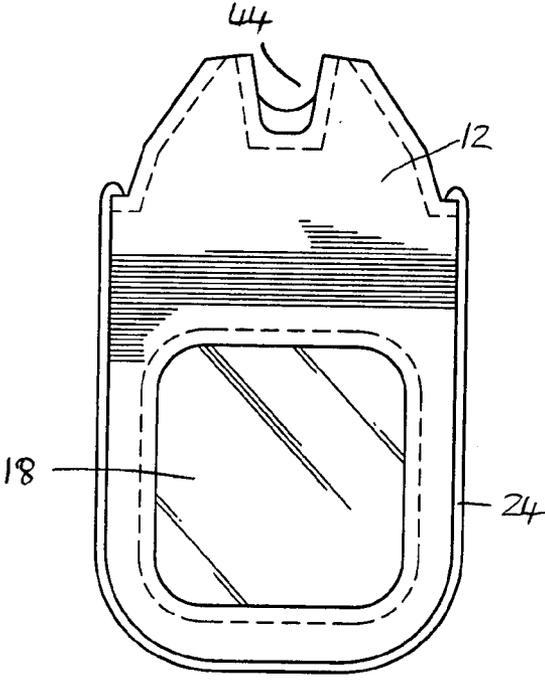


FIG. 2

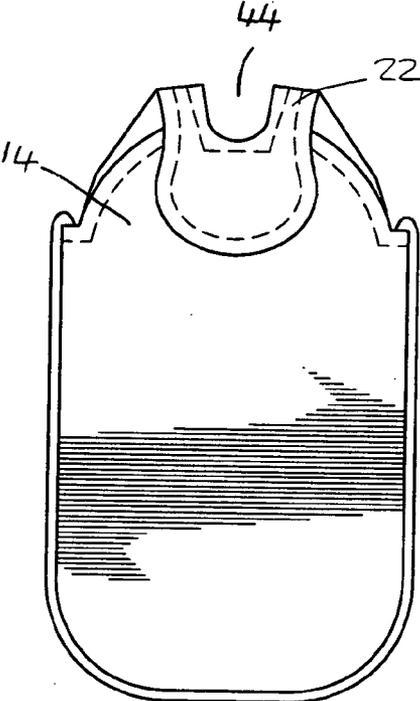


FIG. 3

FIG. 4

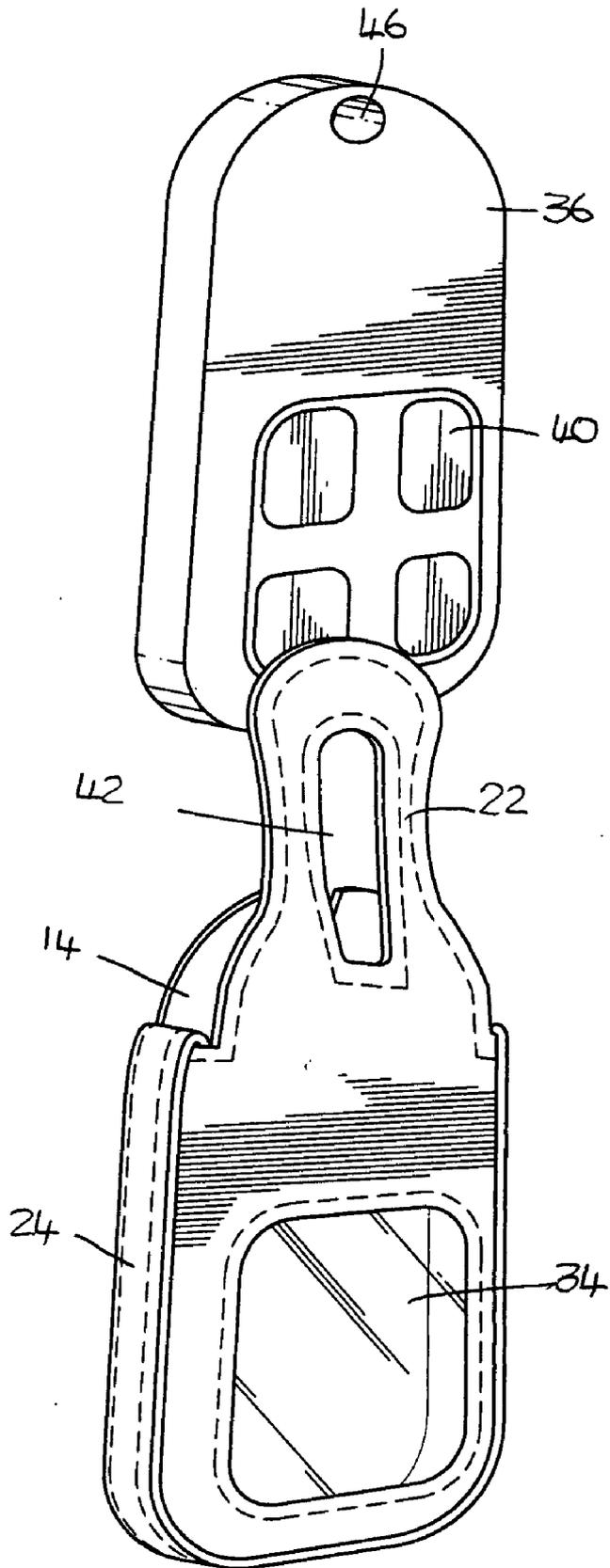


FIG. 5

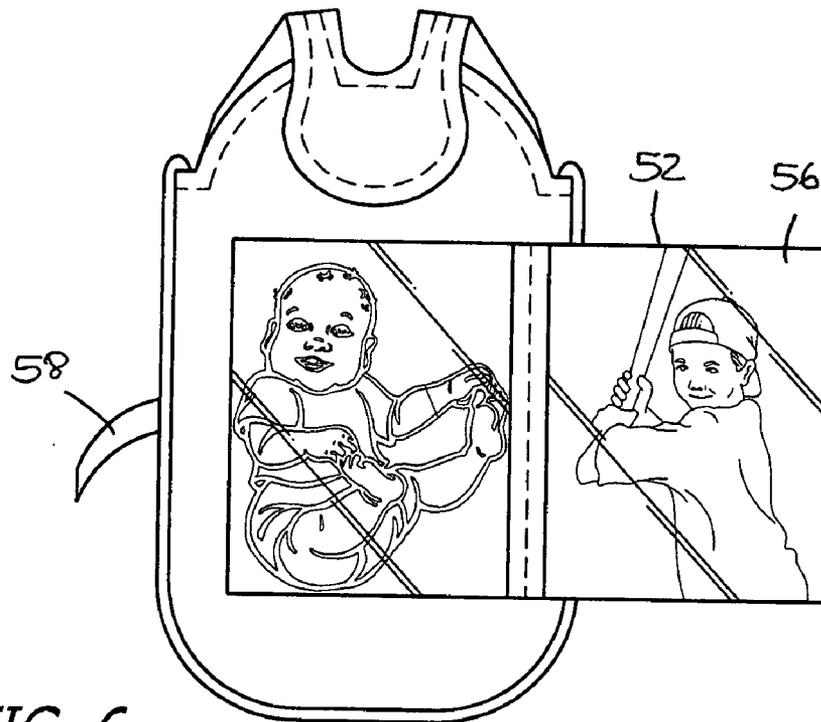
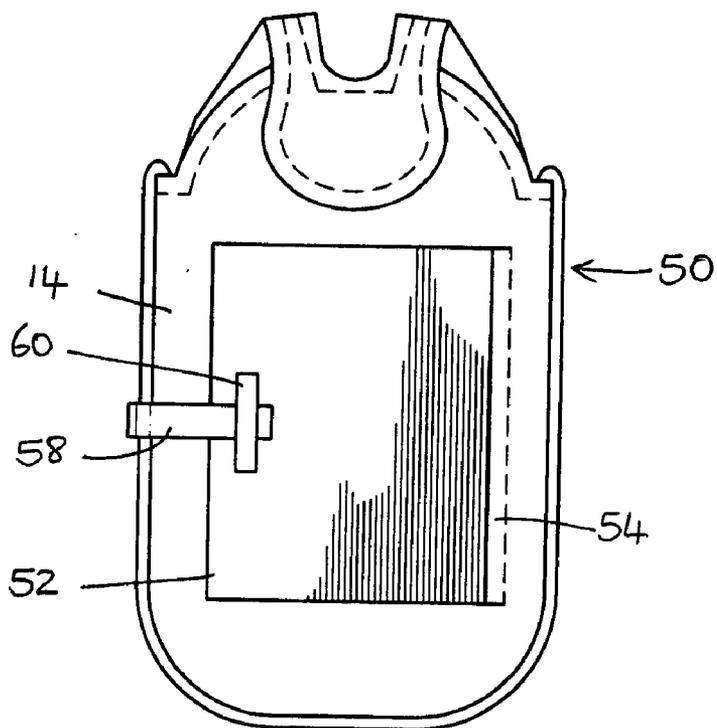


FIG. 6

FIG. 7

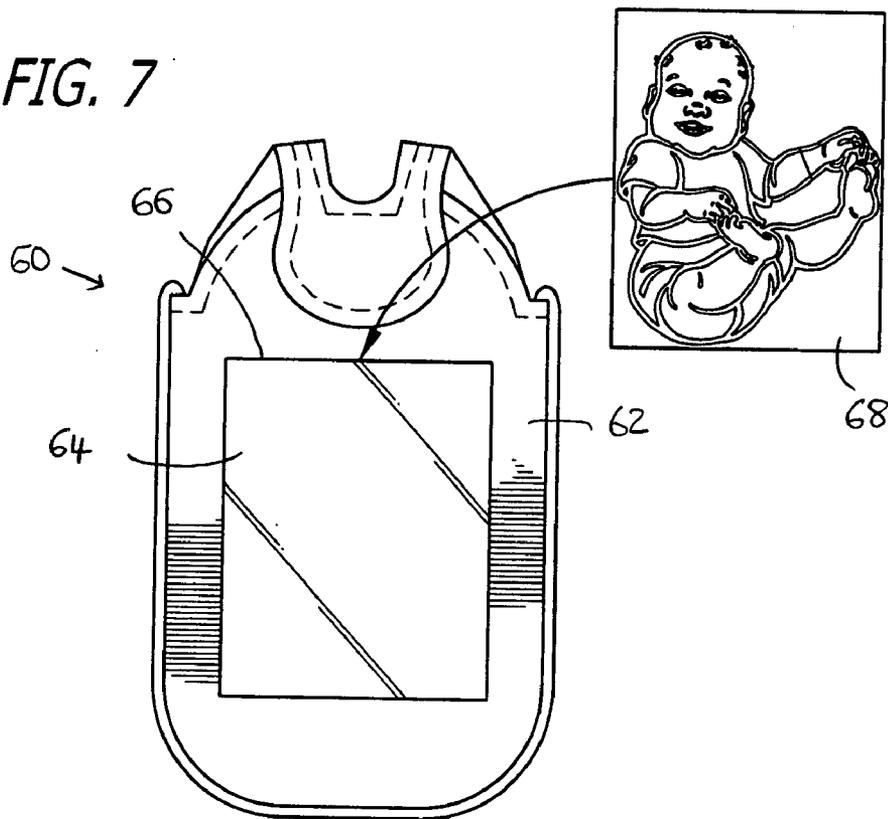
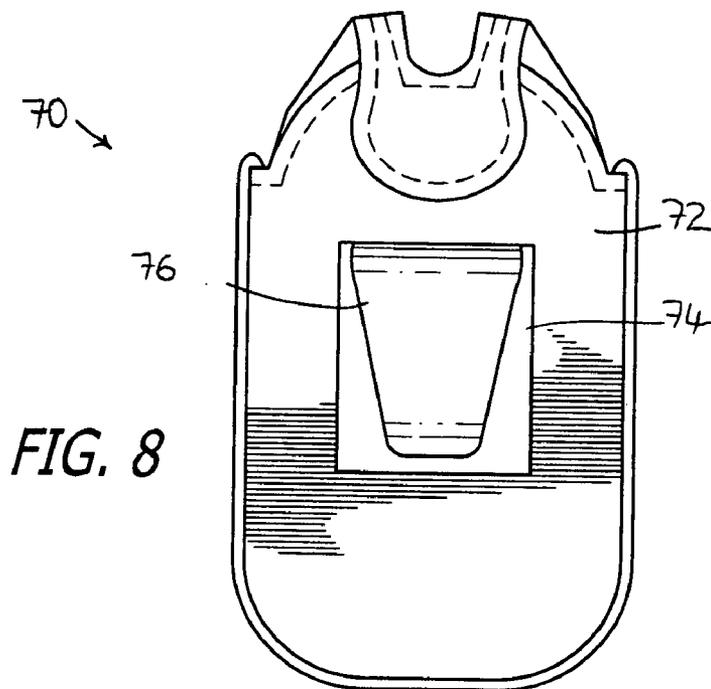


FIG. 8



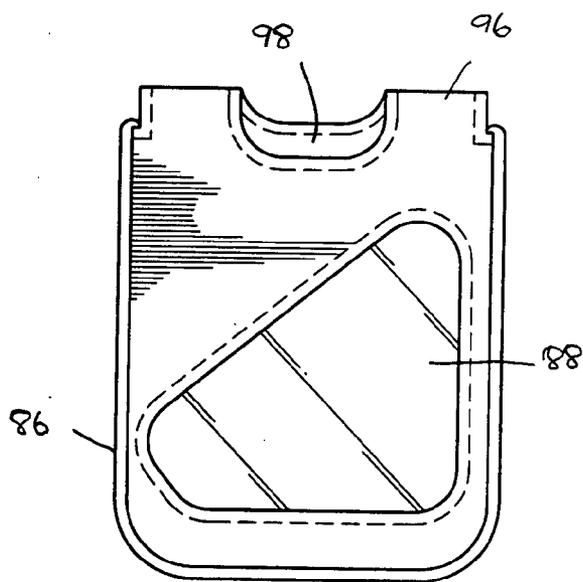
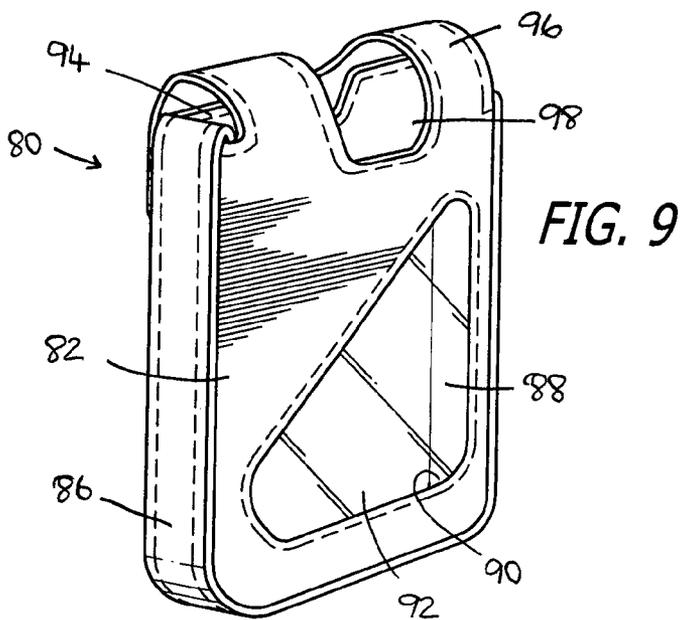


FIG. 10

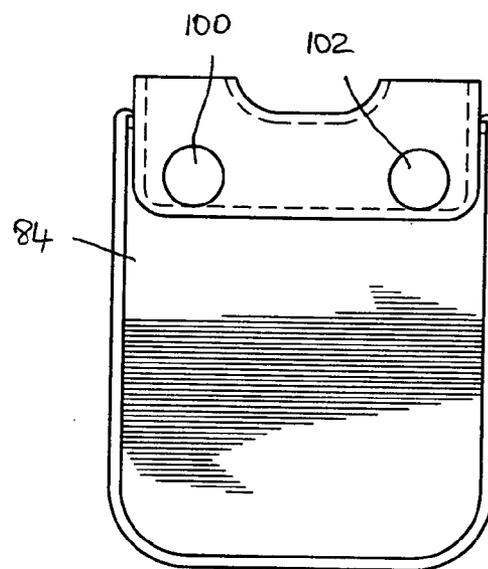


FIG. 11

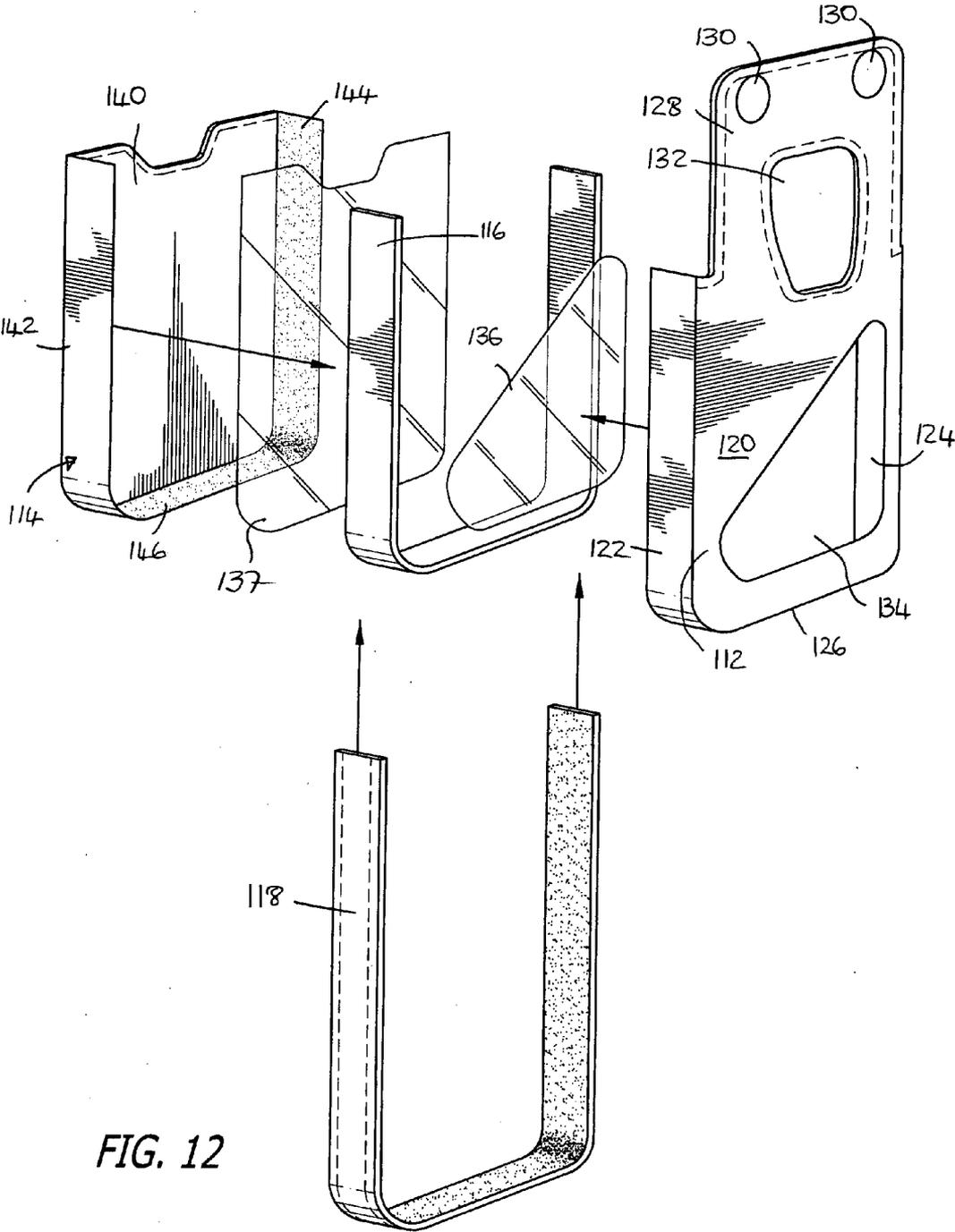


FIG. 12

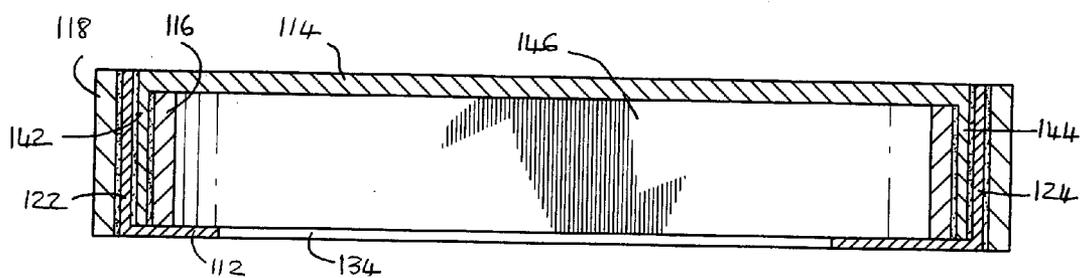
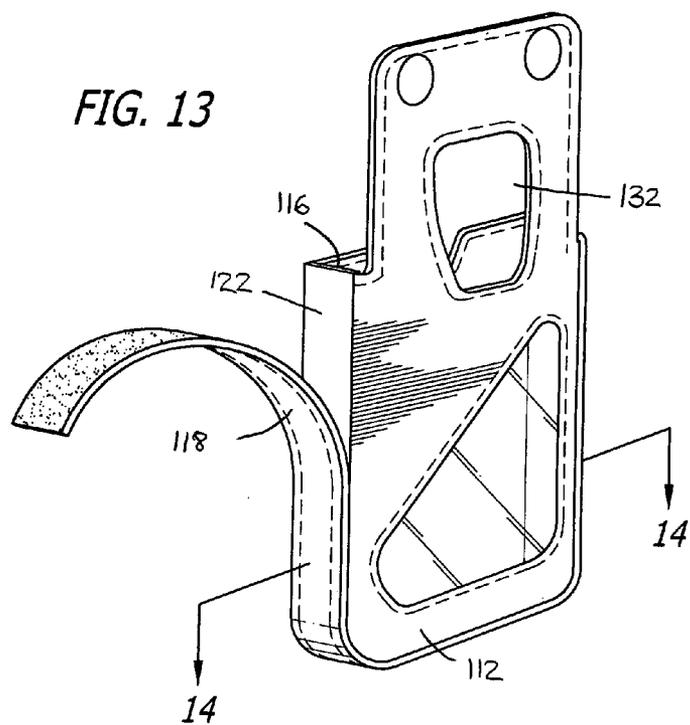


FIG. 14

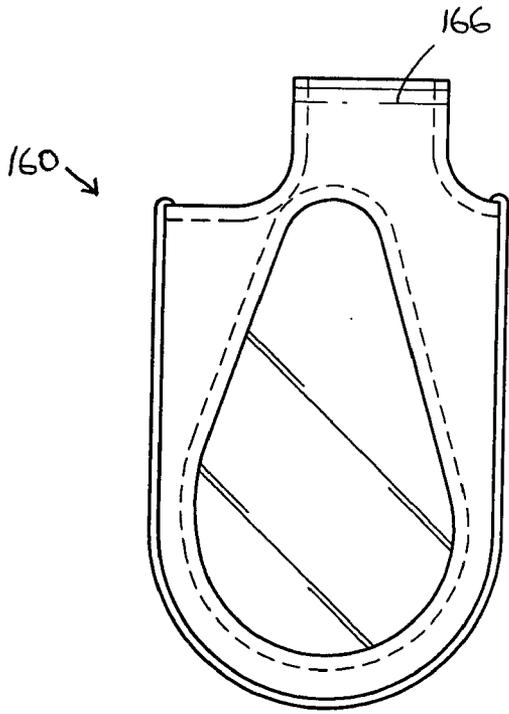
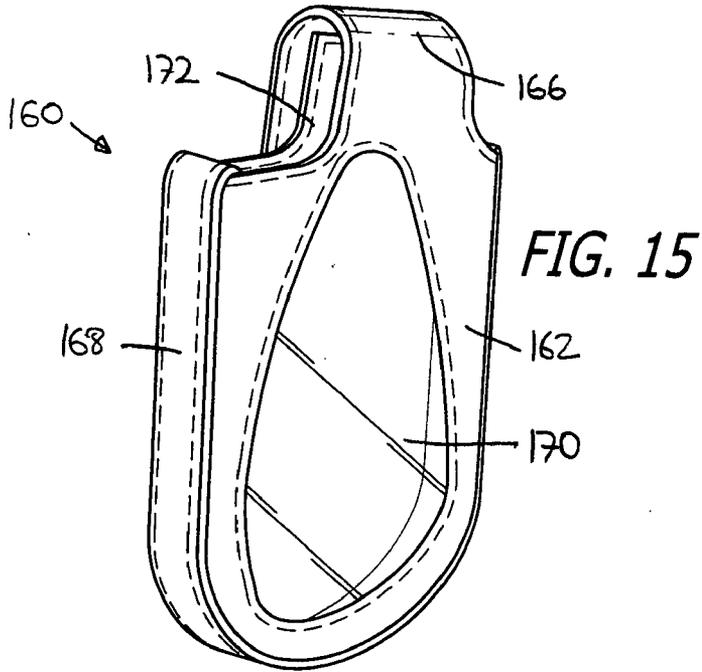


FIG. 16

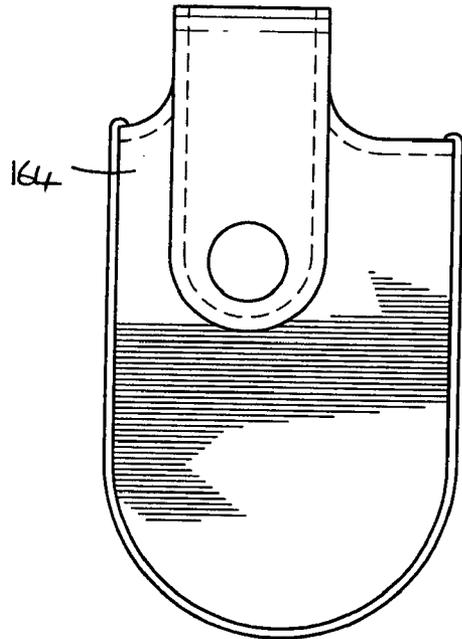


FIG. 17

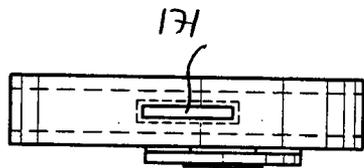


FIG. 16A

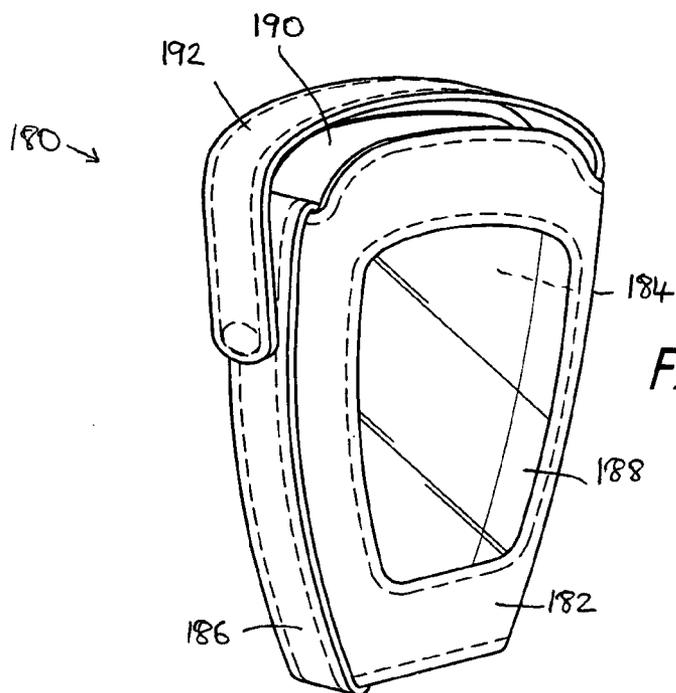


FIG. 18

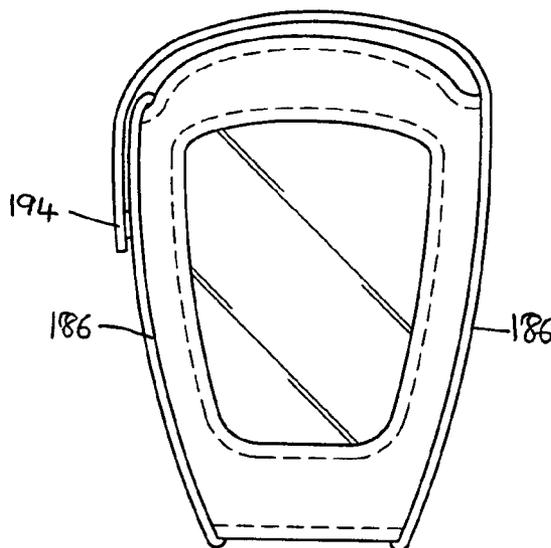


FIG. 19

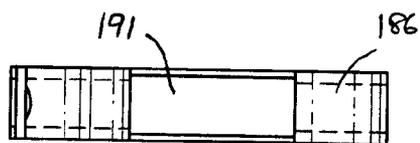
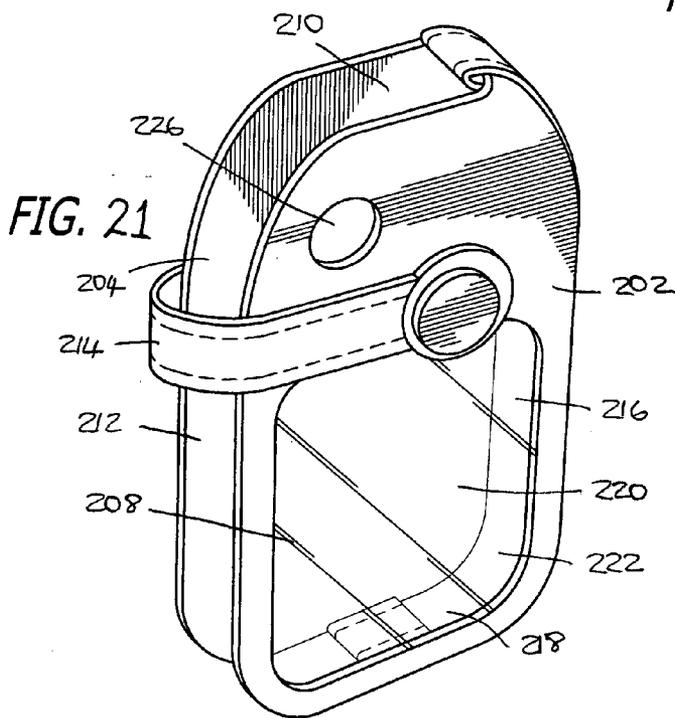
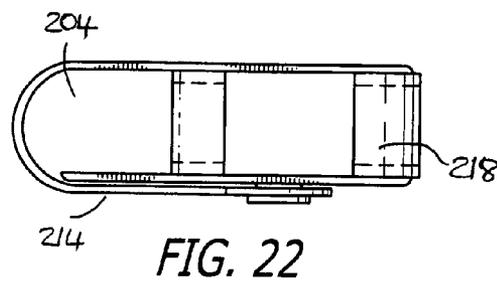
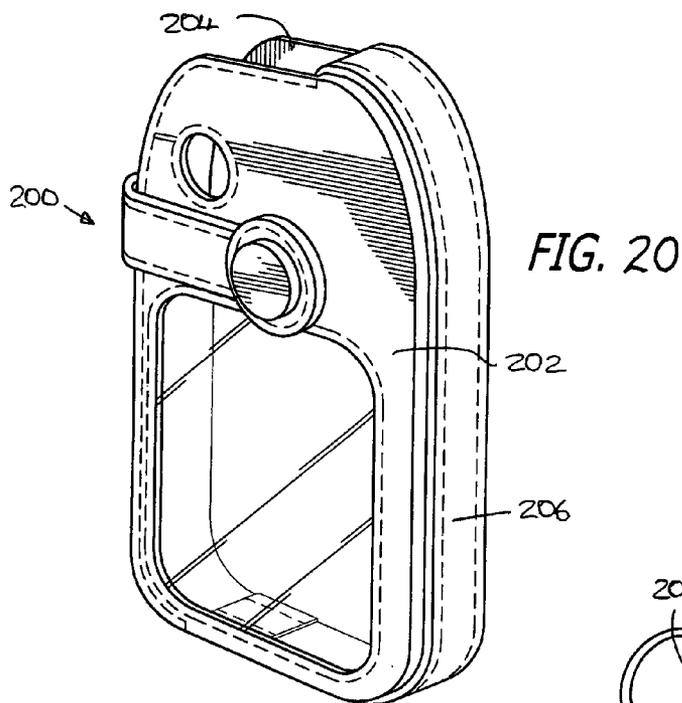


FIG. 19A



AUTOMOBILE REMOTE AND KEY COVER

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 60/872,087 filed Dec. 1, 2006, which is incorporated herein by reference in its entirety.

FIELD AND BACKGROUND OF THE INVENTION

[0002] The present invention relates to automobile remotes and key covers. The invention may be considered automotive and fashion accessories. More specifically, the invention is a cover for device that transmits commands from the key held by an owner to a vehicle associated with that key and initiates, amongst other things, the lock and unlock functions of the doors, the panic alarm. The device is typically mounted on the driver's key ring and is sometimes known as a "key fob" or car remote. It is a fashion driven protective cover that serves to shield the key and remote against normal damage, wear and tear resulting from the use of the device, or inadvertent dropping of the remote on the ground.

[0003] The remote device conventionally comprises a small housing and a number of buttons on the housing which may be pressed by the user to activate a particular function. For example, one button may unlock the doors of the vehicle while another will lock the doors. These buttons and other visible features of these remotes are may often become worn by use and constant handling. The graphic icons or text on the remote may become unrecognizable from such wear making it increasingly difficult for a user to find the relevant button.

[0004] The remote devices may often utilize a plastic loop or ring to attach to the key chain of the vehicle owner. These plastic loops may be easily broken during the course of normal use thereby separating the remote device from the key-chain and allowing it to become easily lost or further damaged.

[0005] The remote devices are conventionally offered in one color: black. This may becomes an inherent problem when trying to quickly differentiate one set of vehicle keys from another such as in instances of valet parking, large fleets such as rental cars, and group congregations.

[0006] Furthermore, keys often are not easily located in a purse, locker, or in the home, gym, or workplace. Relying solely on human memory to locate the vehicle keys have made evident a need for a duplicate system of easily locating the key ring.

SUMMARY OF THE INVENTION

[0007] Accordingly, it is an aspect of the present invention to provide a protective cover which can be customized and easily attached to the vehicle remote device. This cover may provide a unique and fashionable look for the individual's keys, a form of protection against damage, and allow the keys to be more easily located.

[0008] The protective cover of the invention will, in one form, consist of a custom molded plastic cover serving as an inner layer, and one textile or other material cover serving as an outer layer that may be offered in various forms and configurations for fashion appeal.

[0009] The following versions of a protective cover are within the scope of the invention, and are offered as examples only of the scope and range of the invention: separate key fob

(key not incorporated); fixed key protruding from key fob; Euro and/or German version where the key flips out of the key fob by depressing a button; and a keyless version where the bottom portion of the key fob is inserted into the vehicle ignition.

[0010] In one aspect of the invention, soft plastic is custom molded to a key fob to obtain a precise basic mold for each type of vehicle manufacturer key fob. This basic mold may be reproduced and will serve as the protective inner layer of the key cover of the invention.

[0011] The outer layer may consist of leather, a man made or synthetic textile or a chemical compound such as silicone, ABS plastic, neoprene and/or animal hide. The buttons on the key fob remote are preferably covered only with the soft inner plastic layer, making viewing and use thereof easy.

[0012] Each cover, both inner and outer portions thereof, is custom molded for a selected key remote device to allow full and unimpeded use of every feature of the key fob remote. Where there is an additional button on the rear or side of the key fob, this button may also be covered by the plastic inner layer only to provide easy viewing and use of the button.

[0013] A glow in the dark thread may be a part of the protective cover and may be used to assist in locating the key fob when in a dark environment such as a room, car interior, purse, or in luggage.

[0014] The cover device of the invention preferably comprises a closure member for releasably securing the cover to the remote device. The closure member of the cover may consist of a watch band type of device, where one side of the cover has a protruding strap designed to attach to the opposite side by means of a buckle, snap, Velcro, or metal, to name some examples only.

[0015] In another embodiment of the invention, the protective cover of the invention may attach by means of one or two straps, or material protruding from the top of the cover, attaching to the rear of the cover via a snap, Velcro, or magnet, for example. The positioning of the selected type of closure member will depend to some extent on the position of the key ring loop on the key fob device it is covering.

[0016] A further embodiment of the invention may incorporate a zipper, for example, on either the side of or around the circumference of the protective cover.

[0017] The rear of the protective cover of the invention may incorporate any one or more of the following attachments or devices: a watch; a digital measurement instrument such as pedometer, altimeter, or calorie meter; a flip open book type cover showing two or more pictures; a clear plastic window open at the top or sides, to facilitate placement of a photo, design, Media chip, or graphic; slits which may be horizontal or vertical to facilitate the placement of a band or other clip for connection of the cover to additional items; letters; a brand logo; embroidery; a belt, wristband or armband clip or connecting device; a metal logo or shape for product identification or personalization; snaps, Velcro or magnets; and a hook that would fold out serving to connect to one's purse, bag, or luggage.

[0018] Further, a clip may be attached to the side of the cover to facilitate a connection to the following examples of accessories: a purse; a cell phone; a cell phone cover; and a card holder.

[0019] In one preferred embodiment, the cover of the invention is made of five custom shaped and assembled panels, and each or some of the five panels may use different man

made, animal hide or synthetic textile or chemical compound such as silicone, or ABS plastic as a part of the product design.

[0020] In one form of the invention, additional space may be built into the cover increasing either its height or width to provide the space required for a Bluetooth chip, RFID, light, or video screen within the cover.

[0021] The following additional versions of the cover of the invention may be provided:

[0022] (a) Separate key fob (key not incorporated): generally formed and constructed as described above.

[0023] (b) Fixed key protruding from key fob: In such a version, a hole or other opening may be placed in the bottom of the cover to facilitate insertion of the fixed key into the cover.

[0024] (c) German version where the key flips out of the key fob by depressing a button: In this arrangement, one side of the cover remains open or unattached to facilitate operation of the flip out key device. Material may be added for support of the key fob in the cover so as to ensure a snug fit.

[0025] (d) Keyless version where the bottom portion of the key fob is inserted into the vehicle ignition: In this arrangement, the bottom portion of the key fob is left uncovered so that the bottom portion of the key fob can be inserted into the vehicle ignition.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] The accompanying drawings and photographs illustrate various aspects and embodiments of the invention and are intended as examples of the wide range and scope of different protective covers which may be constructed in accordance with the invention.

[0027] In the drawings:

[0028] FIG. 1 is a perspective view of a protective cover in accordance with one embodiment of the invention;

[0029] FIG. 2 is a front view of the protective cover shown in FIG. 1 of the drawings;

[0030] FIG. 3 is a rear view of protective cover shown in FIG. 1 of the drawings;

[0031] FIG. 4 is a perspective view of the protective cover shown in FIG. 1, in the open position, with a remote control device about to be inserted therein;

[0032] FIG. 5 is a rear view of a protective device in accordance with one embodiment of the invention, including a photograph pocket on the rear surface of the protective cover, the pocket being in the closed position;

[0033] FIG. 6 is a view of the protective cover shown in FIG. 5 of the drawings with the photograph pocket in the open position;

[0034] FIG. 7 shows yet another embodiment of the protective cover of the invention including a translucent photo pocket;

[0035] FIG. 8 is a rear view of a protective cover in accordance with one aspect of the invention, including a clamp or fastening means;

[0036] FIG. 9 is a perspective view of a further embodiment of a protective cover in accordance with the invention;

[0037] FIG. 10 is a front view of the protective cover shown in FIG. 9;

[0038] FIG. 11 is a rear view of the protective cover shown in FIG. 9 of the drawings;

[0039] FIG. 12 is an exploded view of a protective cover shown in FIG. 9 of the drawings, showing the various components thereof;

[0040] FIG. 13 is an almost fully assembled protective cover as shown in FIG. 12 of the drawings;

[0041] FIG. 14 is a cross-section through a protective cover shown in FIG. 13, through lines 14-14 thereof;

[0042] FIG. 15 is a protective cover in accordance with yet a further embodiment of the invention;

[0043] FIG. 16 is a front view of the protective cover shown in FIG. 15;

[0044] FIG. 16A is a bottom view of the protective cover shown in FIG. 15 of the drawings;

[0045] FIG. 17 is a rear view of the protective cover shown in FIG. 1 of the drawings;

[0046] FIG. 18 is a front perspective view of a protective cover in accordance with yet a further embodiment of the invention;

[0047] FIG. 19 is a front view of the protective cover shown in FIG. 18 of the drawings;

[0048] FIG. 19A is a bottom view of the protective cover shown in FIG. 18 of the drawings;

[0049] FIG. 20 is a front perspective view of a protective cover in accordance with a further aspect of the invention, wherein a key forms part of the remote control device;

[0050] FIG. 21 is a perspective view of the protective cover shown in FIG. 20, from a different angle showing in more detail the opening for the key; and

[0051] FIG. 22 is a bottom view of the protective cover shown in FIG. 20 of the drawings.

DETAILED DESCRIPTION OF THE INVENTION

[0052] The present invention is a protective cover, preferably one which can be easily attached to the vehicle remote device to protect and locate the vehicle remote device as further described herein from being damaged from events such as by water exposure, impact, or normal wear and tear. The remote cover also facilitates the vehicle remote and/or keys being easily located in the home, office, baggage, or such businesses where they may move, park, or handle numerous vehicles in the course of the normal business activities. The cover device of the invention is preferably made of leather, vinyl, or neoprene material thus enhancing the level of protection from the above-mentioned circumstances. Further, the invention facilitates readily locating the protective device by the use of a fluorescent strip of material, thread, or embroidered design which will have the effect of differentiating the invention from other standard vehicle remote devices.

[0053] With reference to FIG. 1 of the drawings, there is shown one embodiment of a protective cover 10 showing one embodiment of the invention. In FIGS. 1-3 it will be seen that the protective cover has a front panel 12, a rear panel 14, and an opening 16 forming a window in which a transparent plastic window 18 is inserted. At the upper end of the protective cover, there is an opening 20 through which a remote control device can be inserted.

[0054] The front cover 12 incorporates a closure member 22 which folds over the top of the protective cover 10, covers the opening 20, and engages the rear panel 14, as best seen in FIG. 3 of the drawings.

[0055] The protective cover has side edges 24 and 26, and bottom edge 28. A u-shaped connector 30 extends around the side edges 24 and 26 and bottom end 28, and functions so as to hold the front panel 12 and rear panel 14 together. The ends of the u-shaped connector 30 folds over from the outer side of the protective cover 10 to the inner portion thereof, as can be seen at reference numeral 32.

[0056] The front panel 12, rear panel 14 and u-shaped connector 30 all fit together so that the protective cover 10 defines an internal space 34 in which the protective cover is received. As will be seen in FIG. 4 of the drawings, a remote control device 36 can be inserted into the interior space 34 through the opening 14. The closure member 22 is unfolded so as to allow access through the opening 14, and once the remote control device 36 is inserted within the interior space 34, the closure member 22 can once more be closed. The closure member 22 may be secured in the closed position using a snap, Velcro® or any other suitable means.

[0057] It will be seen that the remote control device 36 has four buttons, the buttons each having reference numeral 40, and when the remote control device 36 is constrained within the cover, all of the buttons 40 show through the window 18. The window 18 is made of a soft plastic material, so that the function of the buttons will not in any way be compromised, and they can be easily pressed through the plastic sheath which covers the window.

[0058] It will also be noted that the closure flap 22 includes an elongate slot 42. When the closure member 22 is in the closed position, a unshaped opening 44 is provided. It will be seen that an aperture 46 in the remote control device 36 will show through this unshaped opening 44, so that a metal ring, or other connector piece can continue to be attached to the remote control through the opening 46 due to the provision of the unshaped slot 42.

[0059] With reference to FIGS. 5 and 6 of the drawings, there is shown a protective cover 50, which in many material respects is identical to that shown in FIGS. 1-4 of the drawings. However, it will be seen in FIG. 5 that the rear panel 14 has a pocket 52, secured by a hinge 54, to the back panel 14. When the pocket is opened by pivoting about the hinge 54, it will be seen that a space is provided for two photographs 56. The pocket can be opened and closed, as desired, and held in the closed position by means of a tab 58, engaging a handle 60.

[0060] FIG. 7 of the drawings shows an embodiment of a protective cover 60 which is in most respects identical to that shown in FIG. 1, but it will be seen that the rear panel 62 thereof includes a transparent pocket 64 having an open top end 66 through which a photograph 68 can be releasably inserted.

[0061] FIG. 8 of the drawings shows yet a further embodiment of a protective cover 70 of the invention, showing a rear panel 72 upon which is mounted a clamp 74 including a tapering engagement piece 76 which can be used to attach the protective cover 70 to a belt, other item of clothing, briefcase, luggage or other object, as desired.

[0062] Reference is now made to FIGS. 9, 10 and 11 of the drawings showing a different embodiment of the invention. In these Figures, there is shown a protective cover 80 having a front panel 82, a rear panel 84, and a u-shaped connector piece 86. The connector piece 86 holds the front panel 82 and rear panel 84 attached to each other in spaced relationship to create an internal space 88, designed to accommodate a remote control device, as has been described.

[0063] The front panel 82 includes a triangular-shaped opening 90 and a transparent window 92 which fits therein. The shape of the opening 90 is of course configured based on the positions of the buttons located on the remote control device which will be inserted into the protective cover 80.

[0064] The protective cover 80 has an opening 94 at the top thereof through which the remote control device can be inserted, and a closing flap 96, including an elongate slot 98,

can be moved over the opening 94 and engage the rear panel 84. As seen in FIG. 11, a pair of snaps 100 and 102 releasably fasten, in the appropriate position, the closure flap 96 to the rear panel 84.

[0065] FIG. 12 of the drawings shows the various components and means of construction of a protective cover of the invention, including one that is illustrated in FIGS. 9-11 of the drawings. In FIG. 12, as well as FIGS. 13 and 14 which show the same structure, a protective cover 110 has a front panel member 112, a rear panel member 114, an internal spacer 116 and an external connector 118.

[0066] The front panel member 112 has a front panel 120, sides 122 and 124, and bottom 126. The sides 122 and 124 and bottom 126 depend from the front panel 120 at approximately 90° or perpendicular thereto. The front panel further comprises a closure flap 128 with snaps 130 and an aperture 32 in the closure flap 128. In the front panel 120 itself, there is a triangular cut-out window 134, and a transparent panel 136 attaches to the inside surface of the front panel so as to seal off the window. However, the transparent panel 136 allows the user to view and press buttons on a remote control device which is inserted in the protective cover 110. Further, a rear internal and preferably transparent sheet 137 is provided.

[0067] The rear panel member 114 comprises a rear panel 140, sides walls 142 and 144, and bottom wall 146. The sides walls 142 and 144, and bottom wall 146 extend or depend outwardly from the rear panel 140 at approximately right angles, or perpendicularly thereto.

[0068] The internal spacer 116 will, as the name implies, be located inside the space created between the front panel member 112 and 1 the rear panel member 114, and will help keep these two components apart, so as to retain the space. The internal spacer 116 is of a substantially rigid material.

[0069] The front panel member 112 and the rear panel member 114 are assembled by moving them towards each other such that the side walls 142 and 144, and bottom wall 146 of the rear panel member fit within, in a fairly tight tolerance, the side walls 122 and 124, and bottom wall 126 respectively of the front panel. The internal spacer fits inside of these two panel members, and overlies the various side walls and bottom wall.

[0070] The construction is completed by locating the exterior connector 118 on the outside of the protective cover, over the side walls 122 and 124, and bottom wall 126 of the front panel member 112. The external connector 118 may either be secured in position by gluing, sonic welding, stitching, a combination of any of the above, or such other method as may be useful and effective in the circumstances.

[0071] FIGS. 15, 16 and 17 show yet a further embodiment of the invention, having the same basic structure, but a different shape, designed to fittingly accommodate a different remote control, with different dimensions and button positioning. The protective cover 160 has a front panel 162, a rear panel 164, a closure flap 166 attached as a portion of the front panel, and an external connector 168 for holding the front and rear panels 162 and 164 together. A large window 170 is formed in the front panel so as to provide a clear view, and access to buttons on a remote control device installed within the protective cover 160. The protective cover 160 has an opening 172 at the top thereof, through which the remote control device can be installed when the closure flap 166 is removed, so as to provide the necessary access. In FIG. 16A, a bottom view of the protective cover 160, there is also shown

a slot 171 through which a key attached to the remote can pass so the remote itself is in the protective cover 160 but the key projects outwardly therefrom.

[0072] With reference to FIGS. 18 and 19, a further embodiment is shown of a protective cover 180, having a front panel 182, a rear panel 184 and an external connector 186. The window 188 is shown, as well as an opening 190 at the top of the protective cover 180. In this particular embodiment, a closure flap 192 is an extension of the external connector on the one side, as shown in FIG. 19, so as to cover the opening 190 and connect to the external connector 186 on the opposing side, preferably by means of a snap 194, although any other connector may be used. In FIG. 19A, a bottom view of the protective cover 180, there is also shown a slot 191 through which a key attached to the remote can pass so the remote itself is in the protective cover 180 but the key projects outwardly therefrom.

[0073] With reference to FIGS. 20 and 21, a different embodiment of a protective cover 200 is illustrated. In this particular instance, the remote control device to be inserted within the protective cover 200 also has an ignition key for the vehicle, and the key is one which is pivotable between a withdrawn position in the remote control device, and an extended position in which it projects away from the remote control device when it can be used to insert into the ignition slot to activate the vehicle. The protective cover 200 shown in FIGS. 20 and 21 of the drawings is designed for such a remote control device. As such, the protective cover 200 comprises a front panel 202, a rear panel 204, and an external connector 206. The front and rear panels define an interior space 208 in which the combination remote control device and key can be installed. It will be seen that the embodiment in FIGS. 21 and 22 defines a protective cover 200 which has an upper opening 210 and a lateral opening 212, the upper and lateral openings 210 and 212 being continuous with each other. A closure strap 214 extends from the rear panel 204 to the front panel 202. The protective cover 200 thus has a side wall 216 and a bottom wall 218 extending most of the way across the base of the protective cover 200. With the closure strap 214 disconnected, the combination remote-and-key can be installed with the key in the withdrawn position. The window 220, protected by a plastic sheath 222, provides viewing access to buttons which can be easily pressed. When it is desired to move the key into the extended position, the closure flap 214 is unsnapped so that the openings 210 and 212 are accessible and the key moved from the withdrawn to the extended position. The closure strap 214 is then closed again so as to ensure that the remote control device remains securely within the protective cover 200.

[0074] FIG. 22 is a bottom view of the protective cover 200 as shown in FIGS. 20 and 21.

[0075] Often, the keys in such combination devices are spring-loaded so that pressing a trigger on the outside of the remote control device causes the key to spring from the withdrawn to the extended position. In the protective cover 200, there is an aperture 226 which corresponds to the position of the trigger or activating switch for moving the key from the withdrawn to the extended position. The key is then reloaded within the device by manually moving it against the action of the spring.

[0076] In all, the vehicle remote protective cover of the invention incorporates custom designs for more than 37 different remote types and over 400 different button configurations which can be found on these remote types.

[0077] The invention preferably incorporates a design comprised of a leather, vinyl, silicone, or neoprene material to cover those parts of the vehicle remote, most typically a plastic type housing, that serve as a case for the inner electronics of the vehicle remote. Additionally, a clear or acrylic, plastic, or rubber "window" allows for the buttons on the vehicle device 1 to be clearly viewed and this easily utilized by the vehicle driver while providing the protective cover. Thus the cover of the invention protects the remote device from impact, water and normal wear and tear while at the same time providing access to all operational components of the remote device so as not to impair or inhibit its functioning in any way.

[0078] The cover of the invention is designed so as to easily attach to the remote device by simply slipping the vehicle remote inside the protective cover of the invention. The invention can optionally attach to the person's belt, baggage, purse, or clothing via a metal clip covered by the same material that comprises the invention, or such other form of connection that may be suitable.

[0079] To facilitate the standardization of the invention to all or many types, designs, and configurations of the manufacturers' vehicle remote, the protective cover of the invention utilizes a large window comprised of a clear or colored acrylic, plastic, or rubber material.

[0080] The protective cover of the invention may be custom engineered to past, current, and future vehicle manufacturers' remotes by patterning the cover of the invention to the remote case or housing, and accounting for variations of button configurations utilized in these cases. The cover of the invention may be designed so as to accommodate an integrated mechanical key which forms part of the remote device.

[0081] Other features of the cover of the invention may relate to the presence of a clamp or buckle, snaps or a closure device for securing the cover, and decorative stones may be placed on the remote cover of the invention.

[0082] The invention as shown in the drawings is preferably designed and constructed to cover the key integrated remote device thus protecting the it from the damage suffered during impact or multiple uses. This damage includes but is not limited to: cracks and breaks in the remote housing, and wearing of the operation depicting graphics to the point that are difficult to see.

[0083] The invention is manufactured to custom fit each vehicle manufacturers key fob. The production process incorporates molding an inner plastic shell over the remote or fob, and then constructing the leather, vinyl, neoprene, carbon fiber or other textile outer shell over the inner plastic shell. This inner shell is then directly sewn into, or applied with adhesive, to connect it to the outer textile shell.

[0084] The two stage process produces a custom form fitting cover for the remote or key integrated fob. In fact, an additional feature of the invention is the rigidity and strength provided to the cover of the invention that increases protection to the remote or key integrated fob.

[0085] In one embodiment, a small hole specific to the key designed to be inserted through it is drilled into the protective cover of the invention thus providing a further custom fit and form of attachment for the key fob. A window custom sized and shaped to the particular button configuration of the remote or key fob is cut from the outer shell thus exposing the inner shell which provides the transparent cover for the but-

tons. To reduce roll back or fraying edges of the outer shell, a stitch may be applied to the outside perimeter of the window of the invention.

[0086] Closure of the top of the invention is achieved via at least two different options. The first option comprises the use of buckle and integrated strap. This strap and buckle system is either constructed as one piece of the outer shell or attached to the outer shell of the invention via a metal fastener, sewn in or applied directly to the outer shell via adhesive. The buckle is attached directly to the outer shell via rivet, stitching to the outer shell, or by adhesive. This configuration may also be used as a design where the strap and buckle attachment is utilized for appearance only. This unit will be closed via the buckle and strap assembly attaching to the side of the outer shell of the invention via a snap, hook, Velcro or other adhesive.

[0087] The second option is to close the top of the cover of the invention via folding one or two flaps over the top of the invention, thereby securing it to the front and rear side of the cover by using snaps, Velcro, magnet, or latches.

[0088] Beads or jewels may be attached to the cover by adhesive forming patterned designs on one or all sides of the protective cover of the invention. Additionally, a small picture pocket sewn in or attached to the outer textile shell of the invention may operate as a small picture holder designed to accept photographs.

[0089] Additional embodiments may provide a space integrated into the custom shell increasing the overall length or width of the cover to accommodate an RFID, GPS or Bluetooth device. These allow communication between the protective cover of the invention and anti theft devices, GPS locators used in vehicle recovery, missing item location, and real time communications with a device allowing the consumer to change the graphics or photo via a 1.1 TFT or LCD screen affixed in the same space on the rear of the invention as the photo window.

[0090] Additional attachments to the cover of the invention may be in the form of a belt clip constructed of a plastic, aluminum, or similar light metal. This will allow the user to securely locate the cover in a purse, baggage or other storage item. The user may also attach the invention to a belt, waistband or a pocket of clothing.

[0091] The protective cover of the invention may offer assistance in finding lost keys utilizing a fluorescent or phosphorescent thread sewn therein that will allow the invention to be easily located in a dim light, such as in a handbag or purse.

[0092] One embodiment of the cover of the invention is designed to cover the key integrated fob device (Wherein the remote and the key and configured as a single entity) thus protecting the device from the damage suffered during impact or other uses.

[0093] The cover of the invention is preferably manufactured to custom fit each vehicle manufacturer's key fob. The production process incorporates molding a plastic inner shell over the entire or a portion of the fob and then constructing the leather, vinyl, neoprene, carbon fiber or other textile outer shell over the plastic mold. This inner mold then is directly sewn into, or applied with adhesive to the outer textile shell. The two stage process produces a custom form fitting cover for the key integrated fob.

[0094] The side of the outer shell of the invention specific to the switchblade configuration of the key fob is open allowing for free use of the key without removing the invention.

[0095] A window dimensioned to the button configuration of the key fob is cut from the outer shell thus exposing the inner shell providing a transparent cover for the buttons. To reduce roll back or fraying edges of the outer shell, a stitch is applied to the outside perimeter of the window of the invention.

[0096] The remote device or key fob is easily inserted into the cover of the invention by simply sliding the device into an opening in the cover and maneuvering the fob to secure it therein.

PRODUCTION PROCESS OF EMBODIMENT OF INVENTION

[0097] (1) A plastic mold is taken of the individual key fob. The mold is heated forming the seams for an inner shell.

[0098] (2) The inner shell is then marked with the window. Any given manufacturer's key fob may have between three and four or more buttons. The window of the cover is designed to fit over the a button configuration which where possible allows for the same window to work with several button configurations.

[0099] (3) The outer textile shell is then patterned off the plastic mold custom fitted to the remote.

[0100] (4) A front panel is sewn in around the perimeter of the window cut out to prevent fraying of the edges.

[0101] (5) The outer shell is then assembled by sewing or adding adhesive and tested to fit. Patterns are kept to facilitate mass production process for the same key fob.

[0102] (6) The plastic mold or inner layer is then inserted into the assembled outer layer and adhesive is added to keep the inner layer in place in addition to adding structural rigidity.

[0103] (7) Fabric inserts may be inserted into the plastic cover adhering to the sides to provide a snug fit for the key fob, and help prevent stretching of the plastic mold during continuous use.

[0104] (8) Closing hardware is then added to the top or other convenient portion of the key fob cover allowing for different models to be created. Fastener variations include the following:

[0105] (a) Buckle or watchband type;

[0106] (b) Snaps attached to flaps being sewn in to the outer shell; and

[0107] (c) Velcro® closure being utilized on the same flaps.

[0108] (9) A slice is applied to the outer layer to allow for different accessories to be attached by inserting the accessory between the inner and outer layers. Such accessories may include a photo frame or belt clip where a flap is connected to the accessory via adhesive or metal fastener. This flap can then be inserted between the inner and outer layer as previously mentioned, and sewn or adhesive applied to hold the accessory in place.

[0109] (10) The present invention may utilize technology for key location. Using digital photos and the like, the width or height of the outer shell can be increased to facilitate incorporation of a computer or Bluetooth chip into the cover. The outer shell may be extended over the width or height of the plastic mold. This allows the plastic mold to still grip the key fob for which it was designed. The chip may be inserted first into the outer shell followed by the plastic mold or inner layer.

1. A protective cover for a vehicle remote control device comprising a housing and a plurality of buttons on the surface

of the housing which can be pressed for activating predetermined vehicle functions, the protective cover comprising:

an inner plastic sheath for fittingly surrounding the housing, the inner plastic sheath being comprised a relatively soft and pliable plastic material and having an opening therein through which the remote control device can be inserted; and

an outer sheath substantially surrounding the inner plastic sheath, the outer sheath being comprised of a material selected for its ability to protect the remote control device, the outer sheath having an opening therein which substantially corresponds to the opening in the inner plastic sheath, the outer sheath having a least one window therein, the window being located on the outer sheath so that the buttons can be seen through the window when the remote control device is inserted in the protective cover.

2. A protective cover as claimed in claim 1 further comprising a closure member for at least partially selectively closing the openings in the inner plastic sheath and the outer sheath.

3. A protective cover as claimed in claim 1 wherein the outer sheath has an upper surface and a lower surface and a pocket overlay is formed in the lower surface for receiving a photograph viewable through the pocket overlay.

4. A protective cover as claimed in claim 1 wherein the outer sheath has a clamp attached thereto, the clamp for fastening the protective cover to a substrate.

5. A protective cover as claimed in claim 1 wherein the outer sheath has an upper surface, a lower surface and side edges and further comprises a substantially rigid insert against the side edges to maintain a spaced relationship between at least a portion of the upper and lower surfaces of the outer sheath.

6. A protective cover as claimed in claim 1 further comprising a luminescent threaded piece.

7. A protective cover as claimed in claim 1 wherein the remote control device incorporates a vehicle key movable between a withdrawn position in or against the remote control device and an extended position away from the remote control device, and the protective cover member has an additional opening therein to allow free passage of the movable vehicle key as it moves between the withdrawn and extended positions.

8. A protective cover as claimed in claim 7 further comprising a closure member for releasably opening and closing the additional opening.

9. A protective cover for a vehicle remote control device comprising a housing having upper and lower surfaces and side edges and a plurality of buttons on the upper surface of the housing which can be pressed for activating predetermined vehicle functions, the protective cover comprising:

a front panel member having a front panel with dimensions substantially the same as the upper surface of the housing, at least three side edges depending from edges of the front panel and extending somewhat normal to the front panel and able to cover at least a portion of the side edges of the housing, the front panel member further comprising a window therein through which the buttons on the housing can be viewed;

a rear panel member having a rear panel with dimensions substantially the same as the lower surface of the housing, at least three side edges depending from edges of the rear panel and extending somewhat normal to the

rear panel and able to cover at least a portion of the side edges of the housing, the three side edges of the rear panel member overlapping the three side edges of the front panel member; and

a rigid U-shaped member adjacent the three side edges of the front and rear panels respectively.

10. A protective cover as claimed in claim 9 further comprising a plastic sheath in the window of the front panel member.

11. A protective cover as claimed in claim 9 wherein one side thereof has an opening through which the remote control device can be inserted in the protective cover, and a closure member is provided over a portion of the opening for selectively opening and closing the opening.

12. A protective cover as claimed in claim 9 wherein the rigid member fastens the three side edges of the front panel member to the three side edges of the rear panel member.

13. A protective cover as claimed in claim 9 wherein the remote control device incorporates a vehicle key movable between a withdrawn position in or against the remote control device and an extended position away from the remote control device, and the protective cover member has an additional opening therein to allow free passage of the movable vehicle key as it moves between the withdrawn and extended positions.

14. A protective cover as claimed in claim 9 further comprising accessories for securing to the protective cover, the accessories being selected from the group consisting of: Bluetooth chip, GPS chip, precious stones, semi-precious stones, simulated plastic stones resembling precious or semi-precious stones, color panel inlays or overlays, metal rings, carry straps, handles, identification tags, photograph pocket, advertising indicia, religious indicia, jewelry items.

15. A protective cover as claimed in claim 9 further comprising a space between the remote control device and the front or rear panel members which operates as a compartment for holding accessories attached to the protective cover.

16. A method of forming a protective cover for a vehicle remote control device comprising a housing and a plurality of buttons on the surface of the housing which can be pressed for activating predetermined vehicle functions, the method comprising:

first locating an inner plastic sheath fittingly about the housing, the inner plastic sheath being comprised a relatively soft and pliable plastic material, and forming an opening therein through which the remote control device can be inserted; and

second wrapping an outer sheath substantially about the inner plastic sheath, the outer sheath being comprised of a material selected for its ability to protect the remote control device, the outer sheath having an opening formed therein which substantially corresponds to the opening in the inner plastic sheath, the outer sheath having a least one window inserted therein, the window being located on the outer sheath so that the buttons can be seen through the window when the remote control device is inserted in the protective cover.

17. A method for making a protective cover for a vehicle remote control device comprising a housing having upper and lower surfaces and side edges and a plurality of buttons on the upper surface of the housing which can be pressed for activating predetermined vehicle functions, the method comprising:

locating a front panel member on the housing, the front panel member having a front panel with dimensions substantially the same as the upper surface of the housing, at least three side edges depending from edges of the front panel and extending somewhat normal to the front panel and able to cover at least a portion of the side edges of the housing, the front panel member having a window formed therein through which the buttons on the housing can be viewed;

locating a rear panel member on the housing, the rear panel member having a rear panel with dimensions substan-

tially the same as the lower surface of the housing, at least three side edges depending from edges of the rear panel and extending somewhat normal to the rear panel and able to cover at least a portion of the side edges of the housing, the three side edges of the rear panel member overlapping the three side edges of the front panel member; and
inserting a rigid U-shaped member adjacent the three side edges of the front and rear panels respectively.

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