



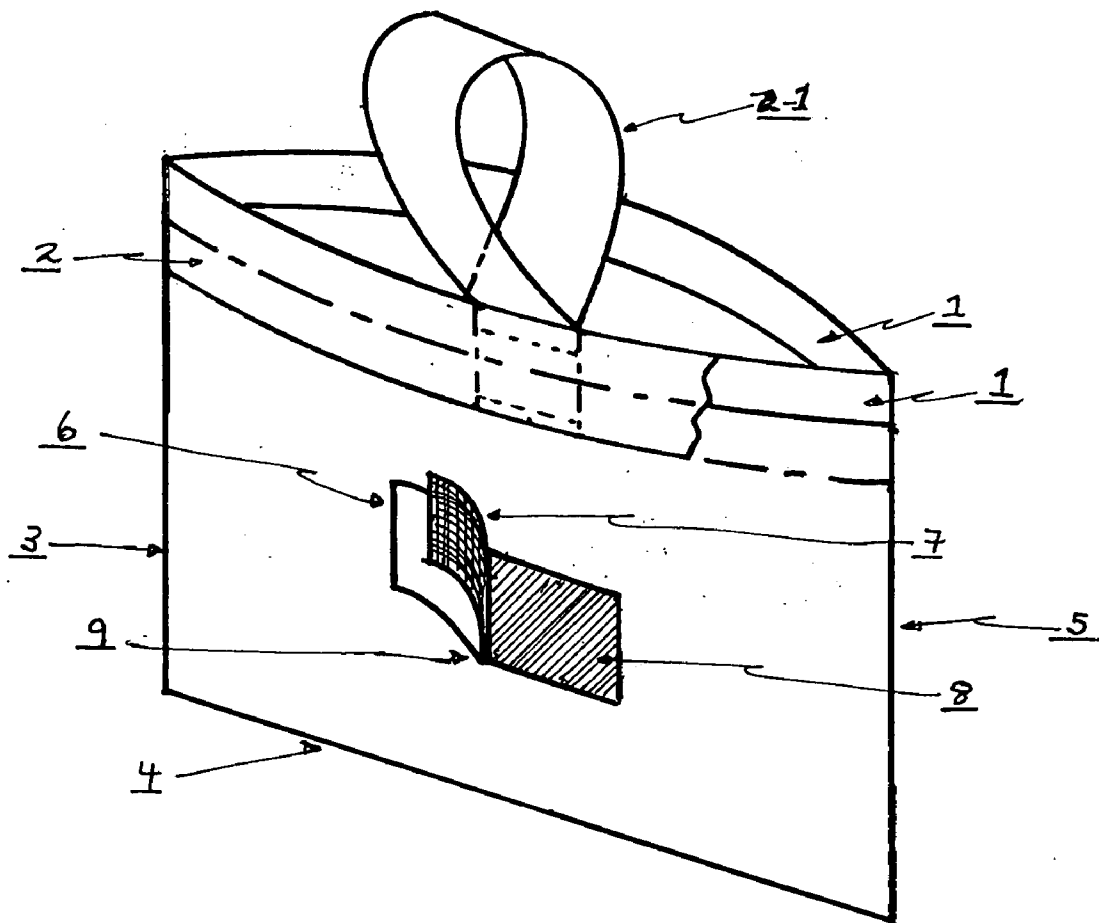
US 20110016615A1

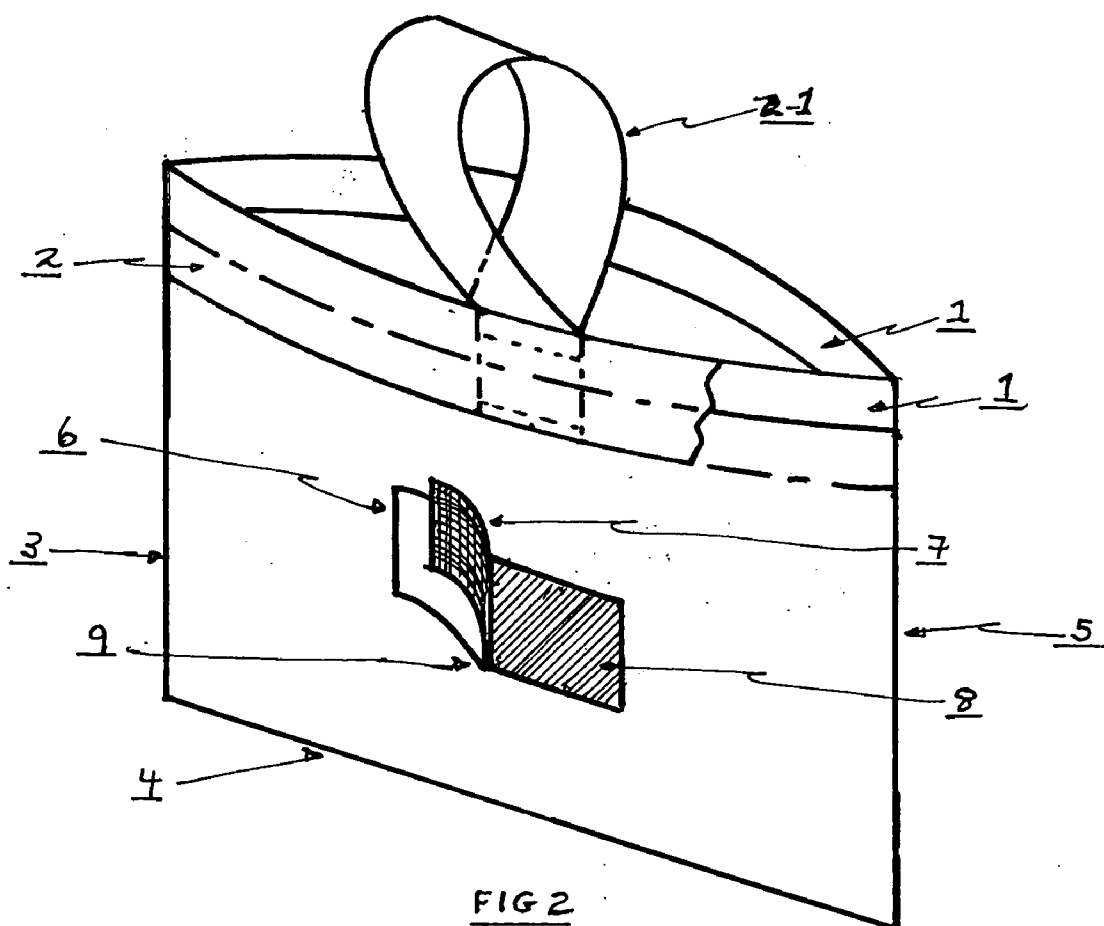
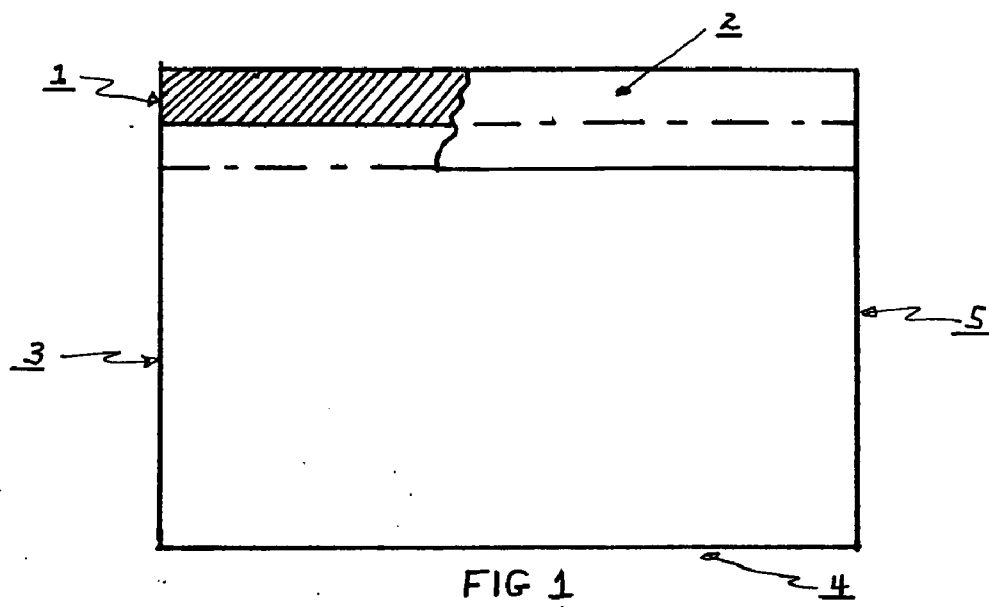
(19) **United States**(12) **Patent Application Publication**
Massey(10) **Pub. No.: US 2011/0016615 A1**(43) **Pub. Date: Jan. 27, 2011**(54) **POCKEX-POCKETS WITH PHYSICAL AND
RADIO FREQUENCY SECURITY****Publication Classification**(51) **Int. Cl.**
A41D 27/20

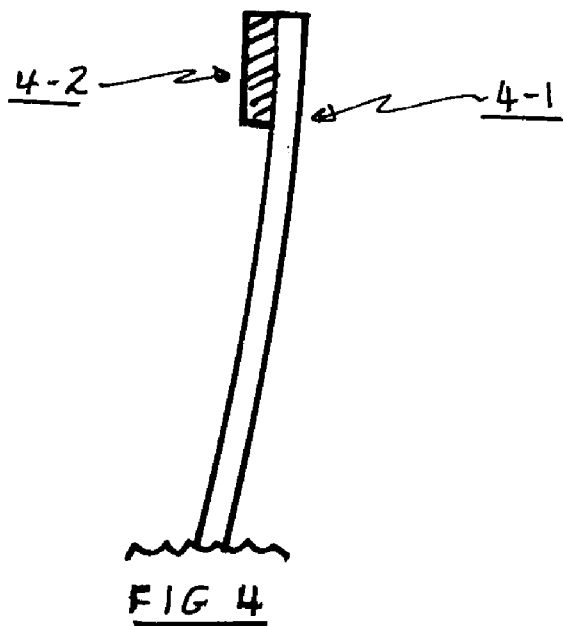
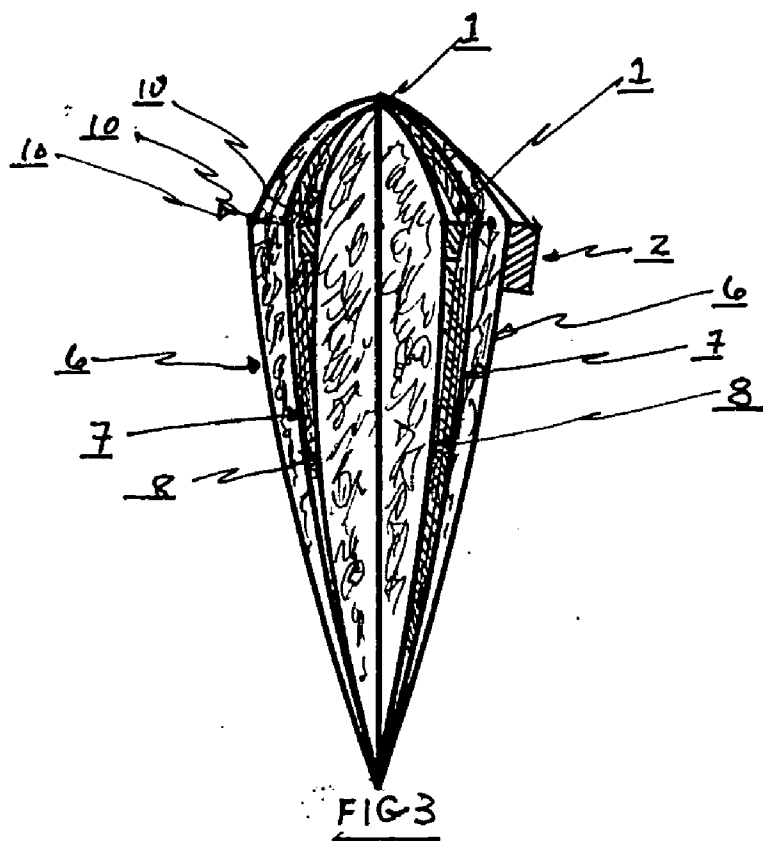
(2006.01)

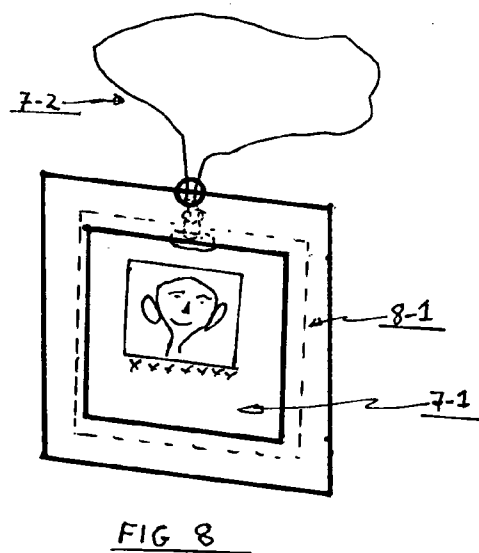
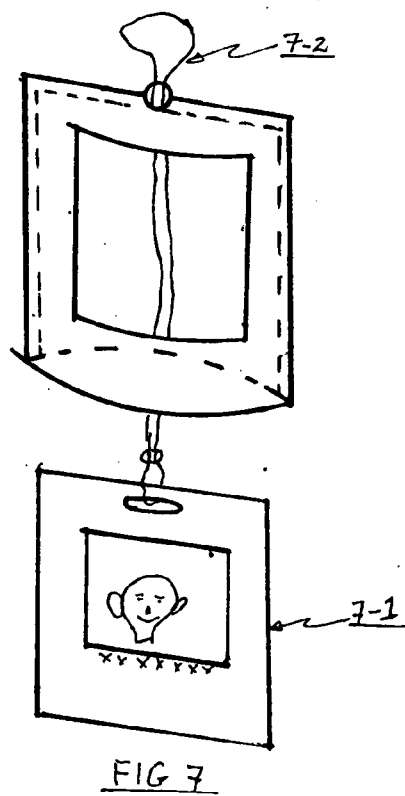
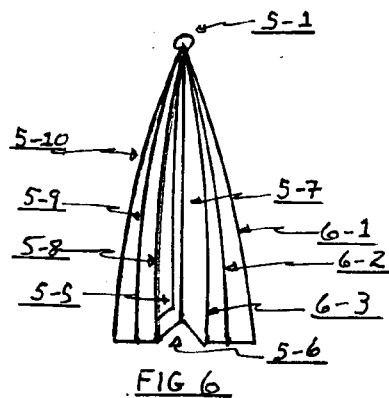
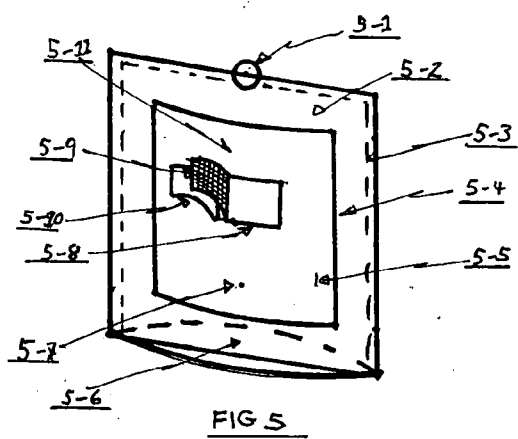
(52) **U.S. Cl.** **2/251**(57) **ABSTRACT**

A pocket or pouch that can be securely attached to the inside of an outer garment that will provide physical and RFID security for documents such as passports and credit cards that are increasingly using active RFID, that also will be user friendly and comfortable for the person using the pouch and will allow quick and easy access to the items when needed. A subset of this pouch or pocket will provide RFID security for the increasingly use of active RFID badges for identification and access to secure areas and facilities. This subset will allow for quick and easy movement of the badge out of the pouch for scanning and quick and easy return to the secure position.

(76) **Inventor: Julie Massey, Knoxville, TN (US)****Correspondence Address:****JULIE MASSEY****P.O. Box 31708****Knoxville, TN 37930 (US)**(21) **Appl. No.: 12/802,195**(22) **Filed: Jun. 1, 2010****Related U.S. Application Data**(60) **Provisional application No. 61/271,475, filed on Jul. 22, 2009.**







POCKEX-POCKETS WITH PHYSICAL AND RADIO FREQUENCY SECURITY

CROSS REFERENCE TO RELATED PRIOR RELATED APPLICATIONS

[0001] Applicant claims priority benefits under 35 U.S.C. #119(e) of U.S. Provisional patent application No. 61/271, 475 filed on Jul. 22, 2009.

STATEMENT AS TO FEDERALLY FUNDED DEVELOPMENT

[0002] There is no federally funded development.

REFERENCE AS TO SEQUENCE LISTING

[0003] There is no sequence listing.

BRIEF BACKGROUND OF INVENTION

[0004] Methods and ways of carrying items such as credit cards, cash, passports, etc. on one's person have been in use for the past several years.

[0005] These have and do include attachment to one's limbs, to one's undergarments, being worn around one's neck, being secured to a clothing pocket.

[0006] Security badges have been either clipped to the clothing or worn using a neck lanyard clipped to badge.

[0007] Due to the great increase in stolen identity, credit cards, money, and personal identity items such as passports when traveling there has developed a requirement for a method of carrying such items that will render the carrying of the item non-visible, be secure on the person against pick pockets, be small enough to be carried comfortably, be easy to access and be easily transferred from one garment to another.

[0008] The introduction, by the State Department, of passports with embedded active microchips, the use of such microchip technology credit cards, and the use of such technology on security badges for non manned secure entrance to secure areas has created a security problem whereby persons with easily and cheaply obtained electronic equipments can scan such items from a distance of 20 to 30 feet and compromise information on the clips. This technology is termed "radio frequency identification" or RFID tagging and the hacking of the information was demonstrated by a self described ethical hacker using a Martrics antenna and a Motorola reader he purchased on E-Bay for \$190.00.

[0009] The current approaches either violate the visibility protocol by being visible around the neck or waist or showing up as bulk under the clothing. They violate the comfort protocol by being hung around the neck wrist or ankle or attached to the undergarments. They violate the ease of access protocol by one having to reach up, around, moving, and/or unbuttoning clothing. They lack the ease of transfer from one garment to another. The solution to the radio frequency problem requires a physical radio shielding mechanism to be embedded in the carry pocket so as to prevent the radio waves from the item from being emitted to the world outside of the carry pocket. An additional issue for the security badge protectors is that of visibility of the badge while protecting its RFID emissions.

[0010] At the date of the filing of the referenced Provisional Patent, the only items containing RFID protection were bulky wallets for putting in pockets or large purses. The wallets are not large enough for passports and the purses are large and subject to theft.

[0011] The desired solution is a family of equipments that will embody the required RFID shielding, provide the physical security, be comfortable to wear, and be user friendly as to access to the secured item

BRIEF SUMMARY OF THE INVENTION

[0012] The POCKEX family of pockets meets all of the protocols of security including RFID protection, ease and comfort of carry, ease of access to the carried item, whether credit cards, passports, and the unique requirements of security badges.

[0013] The document case pocket appropriate for Passports can be configured to be carried length wise or width wise inside the waist of the garment. This is done by use of hook and eyelet strips whereby the female side of the strip is adhesive backed and is attached to the inside of the garment and the pocket is attached to this strip by means of the male strip attached to the pocket. There is also a belt loop sewn into the pocket whereby it can be secured by the belt. The smaller case for credit cards sized items attaches and is used in an identical manner.

[0014] The pocket for the security badge uses a clear plastic sandwich with the RFID mesh in the front with solid RFID sandwich approach for the back. It has a large opening at the bottom of the pocket and a small opening at the top so that the security badge neck lanyard may be inserted and pulled through thus bringing the badge into the RFID secured case but with the written or pictorial data on the badge fully visible.

[0015] Thus in one embodiment the pocket is used to securely carry and use an item the size of a passport.

[0016] In the second embodiment the pocket is used to carry smaller items such as credit cards and other smaller sized items.

[0017] In at third embodiment the pocket is used to protect RFID sensitive security and identification badges but allowing easy withdrawal for scanning while also allowing visual examination when required.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

[0018] FIG. 1 is a front view, i.e. side facing the garment, of the pocket pouch that can be made to hold the intended item either side wise or vertically.

[0019] FIG. 1, 1 is the exploded view showing the magnetic strip closure.

[0020] FIG. 1, 2 is the hook and eyelet male strip which will fasten to the female strip which is attached to the user's garment.

[0021] FIGS. 1, 2 and 1, 5 are the side edges of the pocket.

[0022] FIG. 1, 4 is the lower edge of the pocket.

[0023] FIG. 2 is a 3 dimensional view of the pocket.

[0024] FIG. 2, 1; FIG. 2, 2; FIG. 2,3; FIG. 2,4; FIG. 2,5 are the same as in FIG. 1.

[0025] FIG. 2-1 is the belt loop that may be extended over the top of the garment so that the pocket may be attached to the belt rather than by Velcro.

[0026] FIG. 2, 9 is an exploded view of the side of the pocket showing it's construction.

[0027] FIG. 2,8 is the inner ripstop or equivalent lining of the pocket.

[0028] FIG. 2,7 is the RFID shielding material sandwiched between the inner and outer layer of ripstop or equivalent.

[0029] FIG. 2, 6 is the outer layer of ripstop material or equivalent.

[0030] FIG. 3 is a cross section looking from the end of the pocket.

[0031] FIG. 3, 1, FIG. 3,2, are the same as for FIGS. 1 and 2

[0032] FIG. 3, 6, FIG. 3,7, FIG. 3,8 are the same as for FIG. 2.

[0033] FIG. 3,10 shows the inner pocket ripstop layer, the magnet for closure, the middle RFID shielding layer and the ripstop outer layer.

[0034] FIG. 4 is a cross section of the top of the garment to which the pocket is attached.

[0035] FIG. 4-1 is the top of the garment.

[0036] FIG. 4-2 shows the female side of the Velcro that is attached to the inside of the garment.

[0037] FIG. 5 shows the pouch used to secure a RFID security badge.

[0038] FIG. 5-1 is the top hole from which the neck lanyard exits.

[0039] FIG. 5-2 is the ripstop border surrounding the clear plastic front surface.

[0040] FIG. 5-3 shows the inner dimensions of the clear plastic sandwich which is composed of two layers of clear plastic with a layer of RED shielding between them.

[0041] FIG. 5-4 shows the relative dimensions of the of the clear area of the plastic sandwich to the total dimension of the front of the pocket.

[0042] FIG. 5-5 is the clear area of the plastic sandwich.

[0043] FIG. 5-6 is the opening on the bottom of the pocket between the ripstop surface composing the rear of the pocket and front surface composed of the clear plastic sandwich bordered by ripstop.

[0044] FIG. 5-7 is the inner rear ripstop surface.

[0045] FIG. 5-11 is an exploded view of the front clear plastic construction.

[0046] FIG. 5-8 is the inner plastic layer.

[0047] FIG. 5-9 is the middle RFID shielding layer.

[0048] FIG. 5-10 is the outer plastic layer.

[0049] FIG. 6 is a cross section view from side to side of the pocket.

[0050] FIG. 6-1 is the rear outer ripstop layer.

[0051] FIG. 6-2 is the middle RFID shielding layer.

[0052] FIG. 6-3 is the rear inner ripstop layer.

[0053] FIG. 6, 5-1, FIG. 6, 5-5, FIG. 6, 5-6, FIG. 6, 5-7, FIG. 6, 5-8, FIG. 6, 5-9, FIG. 6, 5-10, are the same as for FIG. 5.

[0054] FIG. 7 is a view showing a security badge neck lanyard pulled through the open bottom of the pocked and out the top small opening.

[0055] FIG. 7-2 is the neck lanyard.

[0056] FIG. 7-1 is the representation of the security badge not yet in the pocket.

[0057] FIG. 8-1 shows the outer edges of the security badges in the pocket.

[0058] FIG. 8-2 shows the view of the security badge through the clear plastic front of the pocket.

[0059] FIG. 8, 7-2 is the same as for FIG. 7-2.

DETAILED DESCRIPTION OF THE INVENTION

[0060] FIG. 1 and FIG. 2 show the basic concepts of the embodiment 1 and 2 of the invention. A front and back surface are each constructed from two pieces of ripstop or other durable material with a piece of RFID shielding sandwiched

between them as shown in FIG. 2, 6, FIG. 2,7, and FIG. 2, 8. A magnetic strip, as shown by FIG. 1, 1, is fastened between the ripstop layers at the top of both front and back constructed surfaces. A male side of hook and eye material such as Velcro is fastened to the top of the outside of the front constructed surface, FIG. 1,2, FIG. 2,2, FIG. 3,2. A belt loop is then fastened to the inside of the front surface, FIG. 2, FIG. 2, 2-1. The ends and the bottom of the front and rear surfaces are then stitched to form pocked as shown in FIG. 2.

[0061] In first embodiment the size will allow the insertion of a passport size item into the top of the pouch. The magnetic strips, FIG. 1, FIG. 2,1, in the top of both the front and rear surfaces will attach and effectively close the pouch resulting RFID shield totally enclosing the inserted item or items. The front and rear surfaces can be so constructed that the opening and attachment mechanisms can be either vertically or horizontally oriented. A female hook and eye material such as Velcro, FIG. 4-2 with heat activated adhesive can be attached to the waist of the garment, either skirt or pants in the position decided by the wearer. The pouch is then attached by means of the male Velcro to the female side on the inside of the waist of the garment. The wearer can then insert the desired items by spreading the magnetic closure and inserting the item. When the magnetic closure is forced open, the entire top side is opened because the magnetic strips are full length of the pocked. With practice this can be accomplished by one hand. When presenting or using the item the magnetic closures are forced open and the item is taken out.

[0062] The second embodiment is like the first except for the size. This embodiment will be sized for credit card like items.

[0063] The third embodiment is a pouch for the protection of RFID type security badge. These badges are used for visual identification and non manned entry verification for secured areas and facilities. For this embodiment a front and surface are constructed, FIG. 5, FIG. 5. The rear surface will consist of RED shielding material sandwiched between two layers of ripstop or other durable material, FIG. 6, 6-1, 6-2, 6-3. The front surface will consist of RFID shielding material sandwiched between two layers of clear plastic material, FIG. 5, 5-8, 5-9, 5-10, FIG. 6, 5-8, 5-9, 5-10. A border of ripstop will be attached around the edges of the plastic material, FIG. 5, 5-2, 5-3 5-4. The front and rear surfaces will be attached on the sides completely, on the top with a opening in the top and the bottom left completely open between the front and rear surfaces, FIG. 5, 5-1, 5-6. The RFID security badge's neck lanyard is inserted from below through the large body opening and out through the top opening, FIG. 7, 7-2. The badge is then pulled by the neck lanyard until it is completely inside the pocked, FIG. 8, 7-2, 7-1, 8-1. The bottom of the pocked will then close and the badge will be completely enclosed by RFID shielding material. The badge will be visible for visual examination while in the pocket. For scanning it is easily and quickly moved out of the open bottom of the pocket and then easily and quickly returned by pulling back through with the neck lanyard.

[0064] The embodiments 1, 2 and 3 provide the capability of RFID shielding which is not in the present art and function forms of present products and provides increase physical security over the present forms.

1. For embodiments 1 and 2, a pocket, or pouch that can be securely attached to the inside of a garment either by means of a hook and eye fastener system such as Velcro or a belt loop which will go over the top of the garment and will allow

attachment to the belt. Either way embodiments 1 and 2 will allow the pouch to be securely out of sight, with a minimum physical signature but allows quick and easy access and removal when needed. In addition to the physical security, the pouch in embodiments 1 and 2 will provide RFID security that will prevent the compromise of the active RFID signature of these items.

2. For embodiment 3, a pocket or pouch that will provide RFID security and prevent the compromise of the active signature of active RFID security badges which are increasingly being used but allows the badge to be quickly and easily moved out of the pouch for scanning.

* * * * *