A security handbag comprises an interior security panel assembly with a matrix of wires incorporated positioned within an exterior bag having an inside chamber. The interior security panel assembly is positioned intermediate the exterior bag outside wall and a lining of the bag. A strap with security cable and a carbiner attachment device is attached to the handbag.
CUT-PROOF ANTI-THEFT BAG CONSTRUCTION

BACKGROUND OF THE INVENTION

[0001] In a principal aspect the present invention relates to a handbag, purse, travel bag or the like which incorporates construction features designed to preclude access to the interior of the bag by cutting through the sides of the bag.

[0002] Handbags, travel bags, purses and the like are often made from flexible materials such as cloth, canvas, leather and similar materials. Such bags typically include one or more interior chambers through which access may be gained by an opening in the top or side of the bag. Such bags also often include a carry strap which is typically connected between opposite sides of the bag. Additionally, such bags often also include multiple side pockets with side access openings.

[0003] On occasion, such bags are subject to theft. For example, often a bag may be hung or supported by the bag strap on a chair or a hook or the like. In such circumstances, a thief may “snatch” the bag by grabbing the strap and departing. Another scheme that has been used by thieves is to use a sharp instrument to cut through the soft sided material comprising the bag. This provides access to the contents which may be lifted through the cut opening in the bag.

[0004] Issues of this nature have been addressed in various ways by certain security designs for soft sided types of bag constructions. For example, U.S. Pat. No. 6,026,662 entitled “Security Device for Luggage” issued Feb. 22, 2000 and the references cited therein teach a method for providing a metal mesh that is placed over a backpack in order to enhance the security of the soft sided backpack. A related patent, U.S. Pat. No. 6,244,081 entitled “Security Device for Luggage” issued Jun. 12, 2001 discloses a security device in the form of a netting with a locking mechanism associated therewith. U.S. Pat. No. 7,069,753 entitled “Security Luggage Bag” issued Jul. 4, 2006 discloses the concept of placement of a wire mesh within the interior of a bag and further providing a draw cord made from a wire cable to close the top of the bag. These prior art patents and the references cited therein are incorporated herewith by reference.

[0005] While such constructions have potential applicability to handbags, they are difficult to assemble, can be bulky and unattractive and may not provide adequate security, particularly with respect to handbags that have carry straps associated therewith. In view of these and other challenges, the present invention was developed.

SUMMARY OF THE INVENTION

[0006] Briefly, the present invention comprises a security construction having an interior panel assembly which is placed within an exterior bag of the type fabricated from generally flexible material such as fabric, leather or plastic. The interior security panel assembly is typically positioned between the exterior layer of material forming the bag and an interior lining. The concepts associated with the interior security panel assembly may be utilized as a single interior panel assembly or as multiple assemblies associated with multiple pockets of the exterior bag. Further, the high security bag may include a cable or wire which is flexible and incorporated into or with the elongate strap that connects to sides of the bag. The wire or cable may include a carbine or which is maintained in a side pocket of the bag and may be released so that the carry strap can be placed around a post or some other object so that it cannot be “snatched” easily. Security clasps are also provided on the zipper closures for the exterior bag.

[0007] The interior security panel assembly in one embodiment includes at least first and second layers of foldable material having a matrix of wires positioned therebetween and stitched into place between the foldable first and second material layers. Binding is provided around at least a portion of the foldable material first and second layers to further encapsulate the material layers and the matrix of wires between those layers. Optionally, glue or adhesive may be incorporated between the layers to further retain the wires in a fixed position. Additionally, the first and second layers of material are stitched together to facilitate maintenance of the matrix of wires in a desired array between the first and second layers of material. The first and second layers of material are typically a fabric or plastic material which is foldable. The security panel assembly, which is comprised of the layers of fabric and the wire mesh matrix, may be fitted into the exterior bag and positioned intermediate the exterior material forming the bag and a liner material, tacked in that position and then stitched or otherwise attached to various seams or margins of the bag.

[0008] As another feature the wire cable that is associated with the carry strap may be fastened to the bag or to the security panel to thereby assure that the wire cable in the strap cannot be disengaged easily from the handbag itself. Further, clasps on the zipper pulls or fastener pulls for the opening to the bag lock or attach to the bag so that access openings cannot be easily opened.

[0009] Thus, it is an object of the invention to provide a security type bag or handbag having a security carry strap wherein the external materials forming the bag may be a flexible, fabric material which is attractive.

[0010] Yet another object of the invention is to provide a highly secure handbag which includes wires and cables that are incorporated therein, particularly within the interior chamber or chambers or pockets of the handbag to protect the contents of the bag and to prevent the cutting or slashing of the bag so as to secure access to the interior.

[0011] Yet another object of the invention is to provide a highly secure handbag having a carry strap which may be easily detached and reattached and fastened in a secure manner around a post or a chair, or some other object to prevent the bag from being “snatched”.

[0012] Another object of the invention is to provide a secure handbag construction which is reasonably priced, highly secure, with unobtrusive features and which is reasonably easy to assemble or manufacture.

[0013] These and other objects, advantages and features of the invention will be set forth in the detailed description which follows.

BRIEF DESCRIPTION OF THE DRAWING

[0014] In the detailed description which follows, reference will be made to the drawing comprised of the following figures:

[0015] FIG. 1 is a side elevation of a typical handbag incorporating the features of the invention.

[0016] FIG. 2 is an isometric view of the panel assembly of FIG. 4 in a folded condition to form an interior security insert within the chamber formed by the exterior bag.
FIG. 3 is an isometric cut-away view showing the placement of the folded panel assembly of FIG. 2 within the exterior bag construction of FIG. 1.

FIG. 4 is an isometric view of an interior security panel assembly which is fabricated and then inserted into an exterior bag and more particularly to the inside chamber of an exterior bag between the material forming the outside layer of the exterior bag and a lining of the exterior bag.

FIG. 5 is an isometric view illustrating a first step in the construction of the interior security panel assembly of the type depicted in FIG. 4.

FIG. 6 is an isometric view of a further step in the construction of the interior security panel assembly.

FIG. 7 is yet another isometric view of an assembly step of the interior security panel assembly.

FIG. 8 is an isometric view illustrating the continued steps of manufacture of the interior security panel assembly.

FIG. 9 is an isometric view of an additional manufacturing step associated with the interior security panel assembly.

FIGS. 10, 11, 12, 13, 14, 15 and 16 are isometric views that illustrate continued steps in the manufacture of the interior security panel assembly in serial order.

FIG. 17 is an isometric view that illustrates the inclusion and positioning of a carbineer associated with the carry strap of the embodiment of the security handbag of the invention.

FIG. 18 illustrates an enlarged isometric view of the carbineer construction of FIG. 17;

FIG. 19 is an enlarged isometric view of a security clasp for a zipper mechanism.

DESCRIPTION OF AN EMBODIMENT OF THE INVENTION

FIG. 1 is a front elevation of a typical handbag incorporating security features associated with the present invention. Handbag 20 includes a carry strap 22 and is defined by an exterior bag 23 configured, in the example, as a parallelepiped construction of a generally flexible material such as canvas, leather, flexible plastic material and similar materials. The exterior bag 23 may further include reinforcement features such as ribs or slats that are incorporated therein or PVC sheets that are incorporated on the inside surface or sewn to the inside of the material forming the exterior bag 23. Typically, the exterior bag 23 includes a top opening 21 which is accessible through a zipper or closure mechanism 24. The exterior bag 23 may also include a side pocket 25 accessible through an opening 27 with a zipper mechanism 26.

The zippers 24, 26 include a security feature as depicted in FIGS. 1 and 19. Thus, the zipper 26 includes a catch or tab 28 which may be inserted into a loop 30 that is attached to a base 32 affixed to the outer layer 34 forming the exterior bag 23. The catch 28 is mounted on a plate 35 by means of a pin 33. Plate 35 has a ring 31 attached to zipper 26. The catch 28 must be manually released by pivoting about pin 33 in order to enable movement and release from the loop 30. Thus, the zipper mechanisms 24, 26 are effectively locked to the bag 20 and require a manual release operation in order to enable operation of zippers 24, 26 to achieve access through zipper openings to the interior of the bag 20.

The carry strap 22 of bag 20 includes an elongate cable 38 which is sewn into and extends the entire length of the strap 22. Strap 22 is attached to bag 20 at one end and to a buckle 42 at its opposite end. The strap 22 also fits through buckle 42 and forms a loop 40 through a carbineer 44. Strap 22 thus forms a loop 40 which enables, in combination with a buckle 42, adjustment of the length of the strap 22. The strap 22 may have one end fastened into the interior of the exterior bag 20 or to a buckle 45 in FIG. 4 attached to a loop 47 affixed to bag 20. The opposite end of the strap 22 is attached to buckle 42. The carbineer 44 is also attached to the bag 20 and slidable fits within a pocket 46 in the side of the exterior bag 20. In order to release the carbineer 44 from loop 40 and open the carbineer 44, a rotatable socket 48 must be manually manipulated. This construction is shown in more detail in FIGS. 18 and 19 wherein the carbineer 44, which slideably fits into the pocket 46 and thus remains generally hidden during use, is released once the socket 48 is unthreaded so that a pivotal arm 50 of the carbineer 44 may be manipulated to open the carbineer 44 so that the loop 40 of strap 22 may be fitted around a post such as a support of a chair or post 52 as depicted in FIG. 17 to thereby retain the bag securely attached to the chair. In other words, the strap 22 is a security feature of the construction by enabling the placement around a post or some other object to prevent ease of snatching the bag 20.

Referring next to FIGS. 2-4 there is depicted the configuration and assembly of an interior panel security assembly 62 which is retained within the bag 20. The interior panel assembly 62 is fabricated in a manner which enables the handbag 20 to remain flexible, yet provides a significant amount of security by preventing cutting through the bag 20 to the interior 60 of the bag 20 for access of its contents. Specifically, the interior security panel assembly 62 is comprised of layers of foldable material which are stitched together over a matrix of wires and then positioned within the bag 20 and maintained within the interior 60 of the bag 20. Thus, a chamber 60 is formed in the bag 20 and typically between a lining 29 in that chamber 60 and the exterior fabric material 23 or other material defining the bag 20.

An interior security panel assembly 62 is depicted in greater detail in FIGS. 3 and 4. Referring to FIG. 2 the interior security panel assembly 62 in the embodiment depicted is comprised of a single panel having a profile that can be described as the profile of the Roman Numerals I. The panel assembly 62 is, in this instance, comprised of a single panel which is foldable along fold lines 70, 72, 74 and 76. When so folded, the panel assembly 62 defines generally the shape of a box as depicted in FIG. 3. Thus, by folding or shaping along the fold line 70 as well as the lines 74 and 76, a box-like structure is formed having a bottom surface 80, opposite side surfaces 82 and 84 and end panels 86 and 88. This box-like assembly or box-like security panel assembly is formed during the manufacturing operation of the security handbag by tacking the panel 62 to the inside face of the material forming the exterior bag 23. Then a lining 29 may be placed over the panel assembly 62 and material forming the exterior bag 23. The layers of lining 29, panel 62 and exterior bag 23 may then be stitched together to form the bag 20. Adhesive may also be used to facilitate assembly. Preferably, stitching is used to form and create the bag 20. Lining 29 fits against the outside of the panel 62 to thereby encapsulate the panel assembly 62. The lining 29 and the exterior material 23 forming the exterior bag 20. Of course, in the practice of the invention, multiple discrete security panels or panel assemblies 62 may be combined to provide a composite interior panel assembly. The embodiment depicted provides an easy and preferred manner of connecting the security panel or panel assembly 62 to the exterior bag 23. The fold lines, for example fold lines 70 and
72, insure that the security of the chamber or interior 60 of the bag 20 is maintained since the wire matrix (as discussed hereinafter) is continuous through the fold lines and the step of forming the bag effectively insures that the panel 62 fits over essentially all of the interior walls of the bag 20 and lines the chamber 60.

[0033] FIGS. 5-16 illustrate multiple steps and their sequence for the formation of the interior panel 62.

[0034] FIG. 5 depicts a first step which is the cutting and formation of a first layer 90 of foldable material. The shape and configuration of the first layer 90 may be that of the Roman Numeral I as previously discussed or any desired shape associated with the design of the bag under construction. The layer 90 of material may be a fabric, plastic sheet or other foldable material. The choice of material is not necessarily a limiting feature of the invention. Wires 92 are then placed over the surface of the first layer 90 of material. The wires 92 may be retained in place by a glue or adhesive material 94. The pattern of the wires 92 in the embodiment depicted is a series of spaced, parallel wires which run diagonally across the surface of the layer 90. FIGS. 6 and 7 illustrate in further detail the placement of the glue or adhesive 94 on the layer 90 and the positioning of the wires 92 on the layer 90 retained by the adhesive or glue material 94.

[0035] A second layer 96, substantially identical to the first layer 90, is then prepared with adhered, spaced, parallel wires 98. The second layer 96 is rotated 180° relative to the first layer 90 and placed over the first layer 90 as depicted in FIGS. 8 and 9. Thus, the second layer 96, which includes wires 98, is fitted over the first layer 90 which includes wires 92. Again, the pattern of the matrix is not a limiting feature. The chosen matrix in this case is a series of crossed wires which have ends 100 that terminate along a boundary 102, by way of example, of the panel layers 90 and 96.

[0036] As the next step, illustrated in FIG. 10, the wires 98 and 92 are stitched into position for retention in the desired position by means of a stitching with nylon or thread 106, for example. The wires 92, 98 are retained substantially in position between the layers 90 and 96 by means of the adhesive or glue 94 as well as the stitching 106.

[0037] Thereafter, a binding material 110 is provided at least along some of the boundary or edges 102 of the security panel assembly 62 as depicted in FIG. 11. Thus, a binding material 110 such as a PVC binding material or any other type of somewhat flexible binding material 110 is fitted over the edge boundary 102 of the panel assembly 62 and subsequently, upon being fitted, is folded over the boundary edge 102 as depicted in FIG. 12. The folded binding 110 is then stitched along stitch line 112 to form an edge of the panel assembly 62. The use of a polyvinylchloride binding 110 or a similar material insures that the ends 100 of wires 92 and 98 will not pierce or project outwardly from the panel assembly. Of course, the wires 92 and 98 are bendable or flexible and thus may be a light cable material or screen wire or some other material that is not easily cut. Typically, the wires 92 and 98 are a metal wire such as 0.7 mm steel wire, but any material which is resistant to cutting can be utilized in the construction. Typically, the wires 92, 98 are in parallel, spaced rows spaced 0.50 to 2 inches.

[0038] Subsequently, as depicted in FIGS. 14 and 15 all of the panel edges 102 are bound so that the wires 92, 98 will not pierce or project undesirably from the interior security panel assembly 62. The binding 110 is thus preferably provided about the entire circumference of the interior panel assembly 62. In the illustration, the panel assembly 62 has a square configuration rather than that of a Roman numeral I. However, the configuration of the interior panel assembly 62 is not a limiting feature of the invention.

[0039] After the security panel assembly 62 is fabricated, it is incorporated into a bag 20 in the manner described previously. The assembly 62 is thus incorporated as a security layer within the bag 20.

[0040] The cable member 38 associated with the strap 22 may be attached to the interior panel assembly 62. The shape and configuration of the exterior bag 23 and the interior panel assembly 62 may be varied in accord with a design consideration. The inclusion of one or more interior panel assemblies 62 within an exterior bag 23 may be adopted.

[0041] The specification and claims are intended to be interpreted broadly with respect to the scope and meaning of adjectives, adverbs and prepositions as well as nouns and verb forms. By way of example, though specific claim language may include the word “between”, the interpretation of such a word shall not be limited to preclude extent of elements beyond boundaries of the example unless specific disclaimer is made or unless by virtue of prosecution the term is to be limited. Articles are also not to be limited and articles such as “a” and “an” shall not be limited to a single item or element unless specifically disclaimed. The examples of the invention should therefore not be interpreted as limiting unless indicated as such.

[0042] Thus, while there has been set forth embodiments of the invention, the invention is to be limited only by the following claims and equivalents.

What is claimed is:
1. A security bag comprising:
an interior panel assembly including at least one panel;
an exterior bag having an inside chamber enclosing the interior panel assembly, said exterior bag including at least one opening for access to the inside chamber of the exterior bag; and
a carry strap for the exterior bag, said strap including a cable member with first and second ends;
said interior panel assembly including a panel having a first and a second foldable material layer stitched together over a matrix of wires, said interior panel having a boundary along an edge with a bindingfastened over the edge to substantially encapsulate at least a portion of the material layers and wires between the layers.
2. The bag of claim 1 wherein the interior panel assembly comprises a single panel.
3. The bag of claim 1 wherein the interior panel assembly comprises a single panel folded to form a multi-sided bag.
4. The bag of claim 1 where the interior panel assembly comprises a single panel with a matrix of crossed wires.
5. The bag of claim 1 including adhesive for binding the wires to the layers.
6. The bag of claim 1 including a wire pattern formed by generally straight, spaced wire segments, each segment extending generally between the edges of the layers.
7. The bag of claim 1 wherein the binding is stitched to the layers of material.
8. The bag of claim 1 wherein the layers of material layers are stitched together.
9. The bag of claim 1 wherein the cable includes a locking carbineer intermediate the ends of the strap.
10. The bag of claim 9 where the exterior bag includes a pocket for slidably receiving the carbineer.
11. A security bag comprising:
an interior panel assembly including at least one panel;
an exterior bag having an inside chamber enclosing the
interior panel assembly, said exterior bag including at
least one opening for access to the inside chamber of the
exterior bag; and
said interior panel assembly including a panel having a first
and a second foldable material layer stitched together
over a matrix of wires said interior panel having a bound-
ary along an edge with a binding fastened over the edge
to encapsulate at least a portion of the material layers and
wires between the layers.
12. The bag of claim 11 wherein the interior panel assem-
bly comprises a single panel.
13. The bag of claim 11 wherein the interior panel assem-
bly comprises a single panel folded to form a multi-sided bag.
14. The bag of claim 11 where the interior panel assembly
comprises a single panel with a matrix of crossed wires.
15. The bag of claim 11 including adhesive for binding the
wires to the layers.
16. The bag of claim 11 including a wire pattern formed by
generally straight, spaced wire segments, each segment
extending generally between the edges of the layers.
17. The bag of claim 11 wherein the binding is stitched to
the layers of material.
18. The bag of claim 11 wherein the layers of material
layers are stitched together.
19. The bag of claim 1 wherein said bag includes a bottom
side and at least one lateral side and said panel assembly is
juxtaposed at least in part to said bottom side and said lateral
side.
20. The bag of claim 11 wherein said bag includes a bottom
side and at least one lateral side and said panel assembly is
juxtaposed at least in part to said bottom side and said lateral
side.
* * * * *