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(54) **MAGNETICALLY LINED CONTAINERS**

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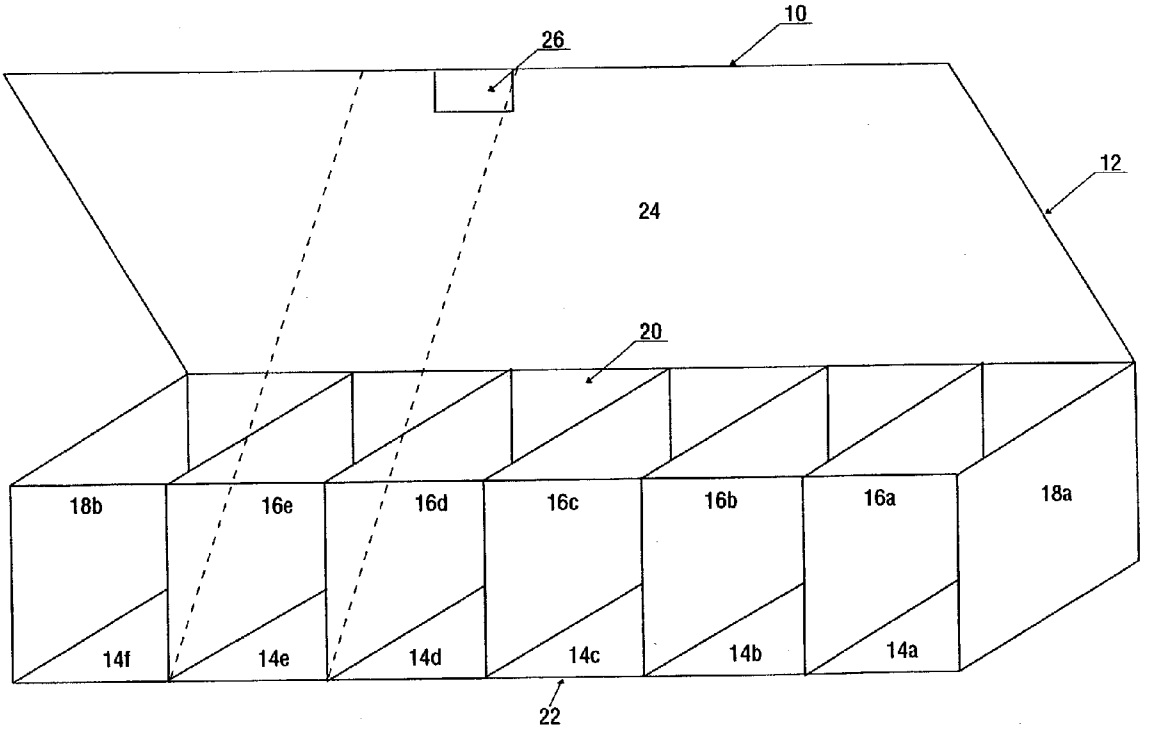
(57) **ABSTRACT**

A multi-compartment container such as a chest or cabinet with multiple drawers, a multi-compartment tool chest or a multi-compartment fishing tackle box which is designed to contain magnetically attracted objects has one or more of the sides, ends and/or bottom lined with a magnetic material whereby the magnetically attracted objects are held there-against.



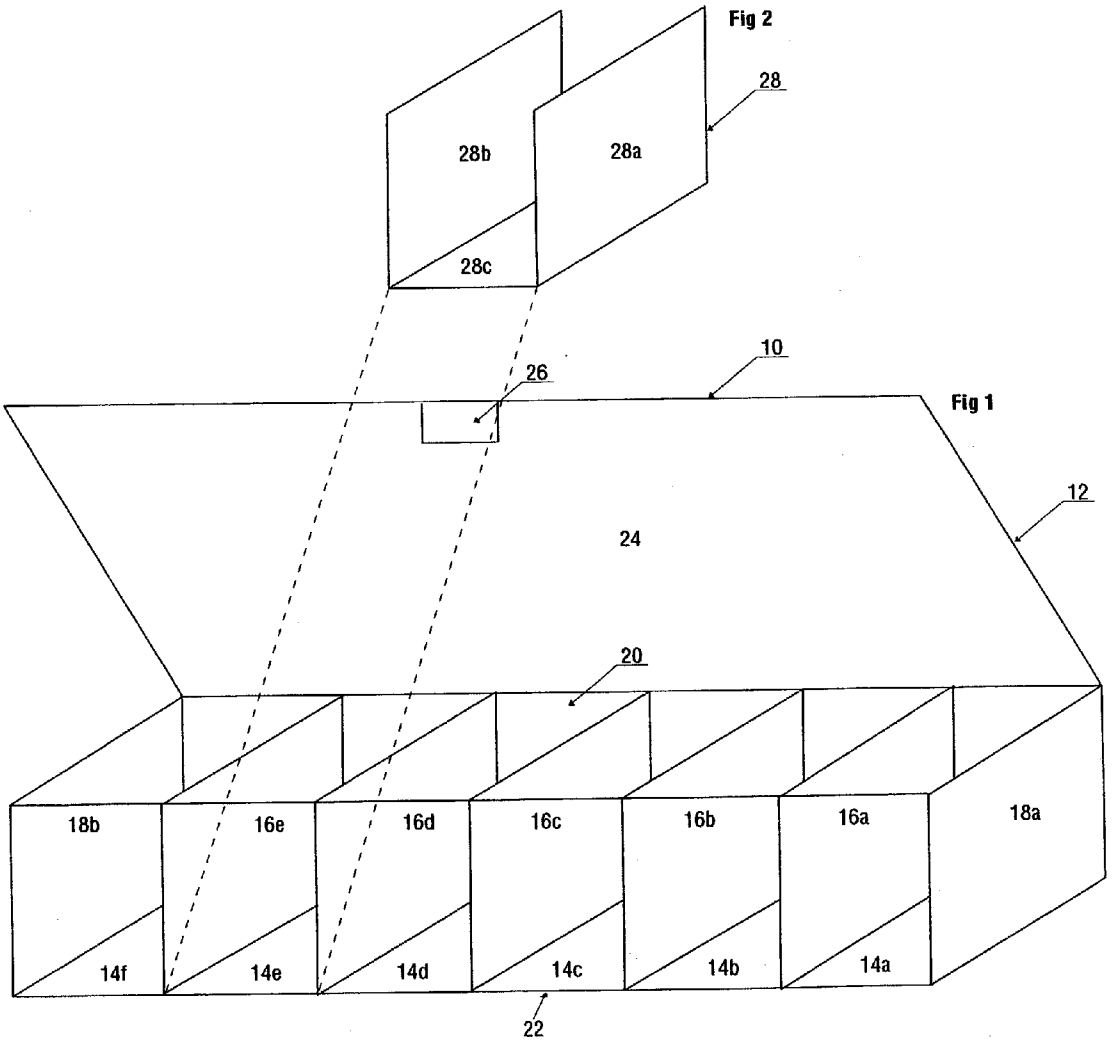


Fig 2
28
28b
28a
28c
10
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Fig 1
12
24
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18b
16e
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16c
16b
16a
18a
14f
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14c
14b
14a
22

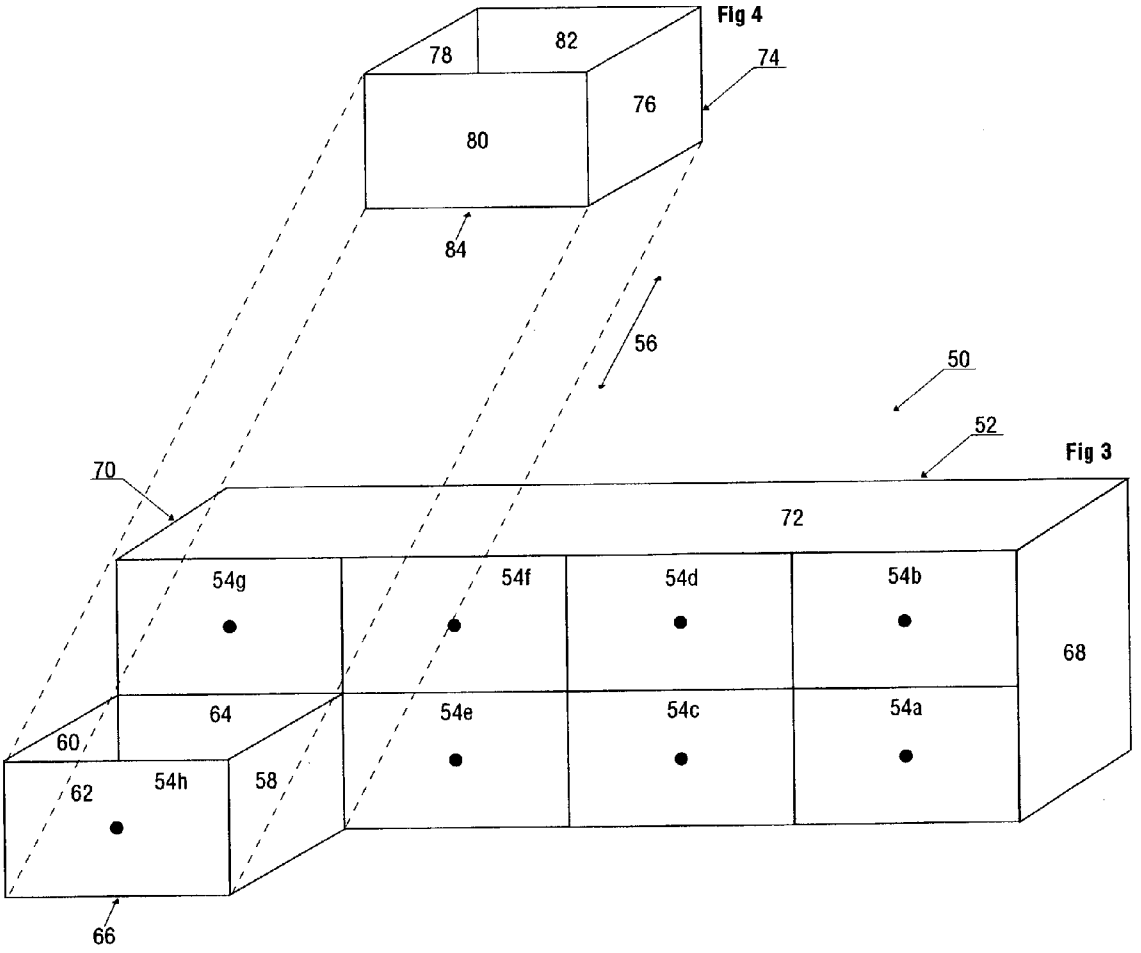
Fig 4
78
82
74
76
80
84
56
50
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Fig 3
70
72
54g
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54d
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54e
54c
54a
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54h
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66

MAGNETICALLY LINED CONTAINERS

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] This invention relates to the container art and more particularly to a multiple storage compartment container such as a multi-drawer cabinet and a multi-segmented container in which the compartments are magnetized to retain magnetically attracted material therein.

[0003] 2. Description of the Prior Art

[0004] In many applications it is desired to store or retain a plurality of similar or dissimilar items in a compartment of a container. Often, such items are not retained in a particular orientation in the compartment. Such applications are often encountered in storing small hardware items such as screws, bolts, washers, nuts or the like. These, and similar items are often just placed into a compartment of a multi-compartment container, such as a compartment in a multi-compartmented tool chest, with no preferred orientation. Should such a container be inadvertently overturned or placed into an orientation which allows the items to spill out of the compartment by gravity, the items spill out of the compartment and require wasted time and energy to pick them up and replace them into the compartment.

[0005] In other applications the compartments may be multi-drawers in a container such as a chest or the like. Such drawers are often utilized for the same type of storage of miscellaneous items as the hardware items described above and can often suffer the same inadvertant spilling of the items.

[0006] In those applications where the items are magnetizable material, the use of magnets may prevent the inadvertant spilling of the items. One example of such a use of magnets is in the conventional paperclip dispenser where a storage compartment is provided for the clips and the top of the storage compartment has an aperture therethrough to allow removal of a paper clip. Surrounding the aperture there is provided an annular shaped magnet which attracts the steel paper clips and retains them thereagainst to allow convenient removal of the paper clips.

[0007] However, such considerations have not been given to other types of storage containers or for other types of magnetizable items. Accordingly, there has long been a need for a magnetic type retraining arrangement for a multi-compartment container to retain magnetizable materials therein.

SUMMARY OF THE INVENTION

[0008] It is an object of the present invention to provide a secure retaining arrangement for magnetizable materials

[0009] It is another object of the present invention to provide a container compartment for securing magnetizable items in a secure relationship to the walls defining the compartment.

[0010] It is yet another object of the present invention to provide a magnetic liner sized to fit in a container compartment for retaining magnetizable items therein in a secure relationship.

[0011] The above and other objects are achieved, in a preferred embodiment of the present invention by providing, in a multi-compartment container, a magnetic liner sized to fit the compartment, in one or more of the compartments of the container. The liner may be fabricated of a flexible or a rigid magnetic material and have a plurality of wall members. Each of the wall members of the liner are adapted to lie in close proximity to one of the walls defining the storage compartment. In one embodiment, the liner has three wall members in a "U" shape and is sized so that each of the legs lies adjacent the side walls of the compartment and the base of the liner lies against the bottom wall of the container. The liner may be held in place in the container by glue, adhesive, mechanical attachment such as screws, nuts and bolts, rivets or the like.

[0012] In other embodiments, the liner may have four wall members for placement closely adjacent to the side walls, bottom wall and back wall of the container.

[0013] In yet other embodiments of the present invention, the liner may have five wall members for placing adjacent the side walls, bottom wall, front wall and back wall of the container.

BRIEF DESCRIPTION OF THE DRAWING

[0014] The above, and other objects of the present invention may be more fully understood from the following detailed description taken together with the accompanying drawing wherein similar reference characters refer to similar elements throughout and in which:

[0015] **FIG. 1** illustrates a multi-compartment container such as often included in a fishing tackle box for containing various items useful in fishing including some magnetically attracted items;

[0016] **FIG. 2** illustrates a magnetic liner which may be utilized to line one or more of the compartments of the container illustrated in **FIG. 1**;

[0017] **FIG. 3** illustrates a multi-drawer chest of the like which may be utilized to store at least some magnetically attracted items; and,

[0018] **FIG. 4** illustrates a magnetic liner which may be utilized to line one or more of the drawers in the chest illustrated in **FIG. 3**.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0019] Referring now to the Drawing, there is illustrated in **FIG. 1 a** preferred embodiment generally designated **10** of the present invention. As shown on **FIG. 1**, there is illustrated a multi-compartment container **12** such as often utilized in a fishing tackle box (not shown) to store various items and implements (not shown) useful in fishing therein. The multi-compartment container **12** is divided into a plurality of separate compartments designated **14***a*, **14***b*, **14***c*, **14***d*, **14***e* and **14***f*. At least some of the items to be stored in the compartments **14***a*-**14***f* may be magnetically attracted items such as steel fish hooks, steel leaders, etc. The compartments are divided by dividers **16***a*, **6***b*, **16***c*, **16***d* and **16***e* which provide the side walls of the containers. A a pair of end walls a **18***a* and **18***b* at opposite ends of the container **12** provide the closure to compartments **14***a* and **14***f*. A back

wall **20** provides a backing to the container **12** and a bottom wall **22** provides a base or bottom wall to the container **12** thereby defining the storage volume therebetween for the containing of the desired items. A lid **24** is hingedly connected to the backwall **20** along the top edge **20'** thereof to allow closure to the top of the multi-compartments in the container **12**. The lid **24** may be provided with a clip **26** for engagement with the bottom wall **22** in the closed position. to allow retention of there lid in such closed position.

[**0020**] According to the principles of the present invention, a magnetized liner may be provided in one or more of the compartments **12***a*-**12***f* to provide secure retention of the magnetic attractive items to be stored in the compartments. **FIG. 2** illustrates a three wall member magnetic liner generally designated **28** having side wall members **28***a* and **28***b* and a bottom wall member **28***c*. The liner **28** is fabricated of a magnetic material which may be flexible or rigid and may be sized as to length, width and height to fit into one of the compartments such as compartment **14***e* closely adjacent to the side walls and bottom walls of the compartment. If desired, the liner **28** may be secured into the compartment by glue, adhesive, mechanical fastening by screws, nuts and bolts, or the like. The liner **28** may, in other embodiments, be four or five sided sized to fit into one of the compartments **12***a*-**12***f*. against the side walls, bottom wall and back wall. A liner **28** may be utilized in one or more of the compartments **12***a*-**12***f* as desired for particular applications.

[**0021**] Referring now to **FIG. 3**, there is shown an embodiment generally designated **50** of a container **52** which may be in the configuration of a chest or cabinet having a plurality of drawer members **54***a* to **54***f* which are designed to slide in and out of the container **52** in the directions indicated by the arrow **56**. Each of the drawers defines a compartment in the container **52** and has five walls defining them storage volume in the drawer: two side walls as indicted for example at **58** and **60** for drawer **54***h*, a front wall **62** and a back wall **64** as well as a bottom wall **66**. The container **52** is also provided with end walls **68** and **70** and a top wall **72**.

[**0022**] In accordance with the principles of the present invention, a liner **74** fabricated from a flexible or rigid magnetic material and sized in length, width and height to fit in the drawer **54***h* closely adjacent to the walls thereof. The liner **74** has side wall members **76** and **78**, front wall member **80**, back wall member **82** and bottom wall **84**. The liner **74** may be fixed into the drawer **54***h* by glue, adhesive or by mechanical means such as screws, rivets, nuts and bolts or the like. Liners **74** may be provided for one or more of the drawers **54***a*-**54***h*. Any magnetizable items placed in a drawer will adhere to one of the wall members of the liner **74** in a secure manner to prevent the inadvertent spilling thereof from the drawer.

[**0023**] The degree of magnetic strength in each of the magnetic materials used for fabricating the liners **28** or **74** as installed in each compartment such as the compartments **14***a*-**14***f* or drawers **54***a*-**54***h* would depend on the compartmentalized containers original intended usage. The material used may be labeled in such a manner so as to reference the magnetic strength of the magnetic material of the liner against the intended magnetically attracted object rendering a user-friendly compartmentalized container. Thus, smaller magnetizable material items would require a lower strength of magnet in the liner and, conversely, larger magnetizable material items would require a stronger magnet strength.

[**0024**] For example, should the original compartmentalized container be intended for comparatively smaller fishing items, the strength of the magnetic material used in the liner for the the individual compartments would be in accordance of keeping fishing hooks, lures and intended tackle from falling free of the box should the tackle box be overturned while the lid is in an unsecured position.

[**0025**] Should the original compartmentalized container be intended for (but not limited to) larger items such a larger nails, screws, nuts, bolts or washers, the strength of the magnetic material used to fabricate the liner for the compartments would have a greater magnetic strength to retain the items therein in a secure position. The individual compartments would, therefore, be in accordance of keeping such items more secure.

[**0026**] The application of the invention would remain consistent with any such compartmentalized container and its original intended use, should any of such compartmentalized containers be intended to carry materials and or objects that would be considered magnetically compatible.

[**0027**] From the above it can be seen that the present invention provides a structure for holding magnetizable items in a compartment to prevent the inadvertent spilling of the items therefrom. Those skilled in the art may find many variations and adaptations of the present invention and the appended claims are intended to cover all such variations and adaptations falling within the true scope and spirit of the invention.

We claim:

1. An improved storage arrangement comprising, in combination:

a storage container having a plurality of compartments, each of the compartments having a plurality of walls defining a storage volume therebetween;

a liner for positioning in at least one of said plurality of compartments, said liner having a plurality of wall members, one of each of said wall members adapted to lie closely adjacent one of the walls of one of said compartments, said plurality of walls of said liner fabricated from a magnetic material, whereby magnetizable items placed in said storage volume are securely held adjacent one of said wall members of said liner.

2. The arrangement defined in claim 1 wherein:

said liner has at least three wall members.

3. The arrangement defined in claim 1 wherein:

said liner has more than three wall members.

4. The arrangement defined in claim 1 wherein:

said liner has five wall members.

5. The arrangement defined in claim 1 wherein:

a plurality of liners, one of said plurality of liners for each of said compartments of said container.

6. The arrangement defined in claim 1 wherein:

said liner is affixed to said walls of said compartment.

7. The arrangement defined in claim 1 wherein:

said compartments comprise a plurality of drawers.

8. The arrangement defined in claim 5 wherein:

each of said liners is affixed to said walls of said compartments.

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