An improved universal wall hanging system for use in hanging an article from a wall is provided. The improved wall hanging system may allow for more convenient storage and hanging of a plurality of differently dimensioned, weighted and configured articles from a wall. The present invention may be utilized to hang oddly shaped articles and may be configured to be utilized with a plurality of different articles when desired by a user. The present invention utilizes a universal receiver unit and an adapter configured to be adapted to the article to be hung whereby the adaptor unit may be releasably attached to the article to be hung and may be releasably attached to any of a plurality of different receiver units.
WALL HANGING SYSTEM

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims priority from U.S. Provisional Patent Application Ser. No. 60/978,350 filed Oct. 8, 2007, which is hereby incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

[0002] The field of the invention is for a wall hanging system and method. More specifically, the field of invention is for an adaptable novel universal system for hanging an article from a wall.

BACKGROUND

[0003] The desire to use space efficiently has been a priority for centuries. One of the simplest ways to conserve space while still allowing for effective location of a device is to hang the device from a wall.

[0004] There are several ways that an individual may be able to hang something from a wall, door or the like. The easiest way to take a nail, or tack and insert that nail or tack into the wall/door and hang whatever needs to be hung from the nail or tack. However, a problem with this type of hanging system is that it is not very stable and does not support a wide range of dimensionally challenged or weight challenged articles. Additionally, because the nail or tack uses the structural integrity of the wall to support the load, if the wall is not of sufficient strength to support the load, the nail and the supported article may be dislodged from its perch.

[0005] Another popular system is the hook. A hook can be looped over a door, or drilled into a wall. Additionally, the hook may have a screw like mechanism on the back portion whereby the hook may be screwed into the support beams behind the wall. The hook is also advantageous because it allows for proper support of a plurality of different articles to be hung therefrom. However, a significant problem with the hook apparatus is that most loads are not uniform weight and distribution, therefore it is often very difficult to use the hooks to properly hang the article. Additionally, many articles to be hung do not have the appropriate dimension and shape to effectively utilize the hook apparatus and therefore, must be hung with another device not having hooks.

[0006] The prior art illustrates a plurality of different hanging systems both elaborate and complex. However, of principal concern is that these prior art hanging systems tend to be uni-functional in that they only provide one way to hang an article from a wall. If an article has a different configuration, weight or distribution, a different hanging system may need to be adapted for use with that particular article. This necessitates that a user have a several different hanging systems available for use with different articles.

[0007] There have been several attempts to utilize a universal wall hanging system that may support a plurality of different articles, but these systems are usually expensive, complex and cumbersome. They also typically require significant configuration and tend to be permanent in nature making them difficult to remove and move to another location if desired by a user.

[0008] Therefore, a need exists for an improved wall hanging system for use by an individual which may support a plurality of different loads, weighted and configured articles. Additionally, a need exists for an improved wall hanging system that does not require significant work to utilize and thereby is relatively easy to configure and make use of. Moreover, a need exists for an improved wall hanging system that may support a plurality of different weights and may be utilized to support different hanging configurations of oddly shaped articles.

SUMMARY OF THE INVENTION

[0009] The present invention provides an improved universal wall hanging system for use in hanging an article from a wall. Additionally, the present invention provides an improved wall hanging system which allows for convenient storage of a plurality of differently dimensioned, weighted and configured articles from a wall. The present invention may be utilized to hang oddly shaped articles and may be configured to be utilized with a plurality of different articles when desired by a user. The present invention utilizes a universal receiver unit and an adapter configured to be adapted to the article to be hung.

[0010] To this end, in an exemplary embodiment of the present invention, an apparatus for use in hanging an article from a surface is provided. The apparatus has a support means adapted to attach to a surface and a receiving portion connected to the support means. Additionally, the apparatus has an adaption portion for connecting to an article to be hung.

[0011] In an exemplary embodiment, the adaption portion is receivable into said receiving portion.

[0012] In an exemplary embodiment, the adaption portion may be configured to support a plurality of differently weighted and dimensioned articles to be hung.

[0013] In an exemplary embodiment, the adaption portion may be removably attached to an article to be hung.

[0014] In an exemplary embodiment, the receiver portion is adapted to receive the adaption portion whereby a plurality of adaption portions may fit into any receiving portion.

[0015] In an exemplary embodiment, the support means may allow for hanging of an article to any vertical surface including doors, walls, exterior walls, vehicles and the like.

[0016] In an exemplary embodiment, the receiver portion may be constructed in a plurality of different configurations including a hook.

[0017] In an exemplary embodiment, the receiver portion may be constructed in a plurality of different configurations including straps, nets, tool racks, shelving and the like.

[0018] In an exemplary embodiment, the apparatus has a receiver portion configured to receive a plurality of adaptors thereon such that each receiver portion may support a plurality of adaptors and thereby support a plurality of different articles.

[0019] In an exemplary embodiment, the apparatus may have a receiver portion connected to an adaptor whereby the adaptor is releasable from the receiver portion when the article is removed from its hanging position and whereby the adaptor is removable from the article to be placed on another article to be hung.

[0020] To this end in an exemplary embodiment of the present invention, a method for hanging a device is provided. The method comprising the steps of: providing a support means adapted to attach to a surface the support means being removable attachable to a surface; providing at least a receiving portion integrally formed in the support means whereby the receiving portion is adapted to receive an attachment portion; and providing a plurality of attachment portions
whereby an attachment portion is mated to the receiving portion whereby the attachment portion is configurable to hang and article thereon.

[0021] In an exemplary embodiment, the method further comprises a surface wherein the surface is a wall.

[0022] In an exemplary embodiment, the method further comprises applying an adhesive to the attachment portion whereby the attachment portion may be substantially permanently affixed to an article to be hung.

[0023] In an exemplary embodiment, the method further comprises inserting the attachment portion into the receiving portion of the support means for connectivity of the attachment portion to the support means.

[0024] In an exemplary embodiment, the method further comprises providing a plurality of adaptors which may be configured for facilitating the hanging of a plurality of devices whereby the adaptors may be received by the receiving portion.

[0025] In an exemplary embodiment, the method further comprises providing a locking mechanism on the attachment portion to allow for securement of the attachment portion about the receiving portion and further allowing for release of the attachment portion from the receiving portion of the apparatus.

[0026] In an exemplary embodiment, the method further comprises allowing for removal and replacement of the adaptor from the receiving portion such that the adaptor may be removed and replaced with a more suitable adaptor for use.

[0027] Among the many different possibilities contemplated, the apparatus may allow for multiple configurations of the apparatus whereby a plurality of different articles may be hung therefrom.

[0028] Additionally, in an exemplary embodiment, the apparatus may be configured to accommodate a plurality of different articles having different shapes and dimensions.

[0029] In another exemplary embodiment, it is contemplated that the apparatus may be configurable to accommodate a plurality of differently weighted articles therefrom.

[0030] In yet another exemplary embodiment, it is contemplated that the apparatus may be configured to have a hook apparatus.

[0031] Still another exemplary embodiment contemplates where the apparatus may be configurable to be simple peg system, a plurality of hooks or any other configuration necessary to hang any particular article.

[0032] A further exemplary embodiment contemplates that the apparatus may be constructed of a suitable material such as plastic.

[0033] In another exemplary embodiment, it is contemplated that the apparatus may be constructed of any suitable material such as metal and the like.

[0034] Further, a contemplated embodiment of the apparatus may have an adaptor portion and a receiver portion.

[0035] Additionally, in an exemplary embodiment, the apparatus may have a adapter portion fitted to the article to be hung.

[0036] In yet another exemplary embodiment, it is contemplated that the apparatus may have a adapter portion fitted to the article to be hung and a receiver portion affixed to the wall.

[0037] A further exemplary embodiment of the present invention may include an apparatus whereby the apparatus may only have a receiver portion configured to receive the article to be hung.

[0038] Still another exemplary embodiment of the present invention may include an apparatus having a receiver portion adapted to fit to the wall and an adaptor portion whereby the adaptor portion may fit into the receiver portion.

[0039] A further exemplary embodiment of the present invention may include an apparatus having a receiver portion adapted to fit to the wall and an adaptor portion whereby the adaptor portion may fit into the receiver portion and whereby a plurality of different adaptor portions may be utilized to fit into the receiver portion.

[0040] Yet another exemplary embodiment of the present invention, an apparatus having a receiver portion adapted to fit to the wall and an adaptor portion whereby the adaptor portion may fit into the receiver portion and whereby a plurality of different adaptor portions may be utilized to fit into the receiver portion whereby the adaptor portions are interchangeable with a plurality of receiver portions.

[0041] Yet another exemplary embodiment of the present invention may include an apparatus having a receiver portion adapted to fit to the wall and an adaptor portion whereby the adaptor portion may fit into the receiver portion and whereby a plurality of different adaptor portions may be utilized to fit into the receiver portion whereby the adaptor portion may be releasably affixed to any article for receipt of the article to the wall hanging apparatus.

[0042] In an exemplary embodiment of the present invention, an apparatus may be provided whereby the apparatus has a receiver portion adapted to fit to the wall and an adaptor portion, whereby the adaptor portion may fit into the receiver portion and whereby the adaptor portion may be removably attached to an article whereby the adaptor portion may be fitted to a plurality of different articles to be hung by a user.

[0043] Another exemplary embodiment of the present invention may include an apparatus that may be adapted for use with a plurality of differently sized, dimensioned, weighted and configured articles to be hung.

[0044] In still another exemplary embodiment of the present invention an apparatus for hanging an article from a wall is provided wherein the apparatus does not require location of wall studs to properly support the weight of the article to be hung.

[0045] In an exemplary embodiment of the present invention, an apparatus is provided for hanging an article from a wall wherein the apparatus does not require pegboard, slat-wall or wall studs as the apparatus has a weight bearing mechanism to support the receiver and adaptor portions.

[0046] Still, in another exemplary embodiment of the present invention, an apparatus is provided whereby the apparatus may be adapted to placed in almost any location including doors, walls, exterior walls, garages, vehicles and the like.

[0047] In yet another exemplary embodiment of the present invention, an apparatus is provided whereby the apparatus does not require tools to assemble, and/or utilize.

[0048] Further, in another exemplary embodiment of the present invention, an apparatus for hanging an articles is provided whereby the apparatus may have a plurality of attachment heads such as a hook.

[0049] In another exemplary embodiment of the present invention, an apparatus for hanging an article is provided whereby the apparatus may have a plurality of attachment heads such as a strap, shelf, net and the like.

[0050] Still another exemplary embodiment of the present invention is to provide an apparatus that may be utilized to
hang an article from a wall wherein the apparatus is convenient and flexible to allow for hanging of a plurality of different articles.

Various objects, features, aspects and advantages of the present invention will become more apparent from the following detailed description of preferred embodiments of the invention, along with the accompanying drawings in which like numerals represent like components.

BRIEF DESCRIPTION OF THE DRAWING

Fig. 1 is a perspective view of the invention illustrating the apparatus in an exemplary embodiment of the present invention;

Fig. 2 is a perspective view of the invention showing the back side of the apparatus in an exemplary embodiment of the present invention;

Fig. 3 is a side view of the apparatus in an exemplary embodiment of the present invention;

Fig. 4a illustrates an adaptor of the apparatus in an exemplary embodiment;

Fig. 4b illustrates an alternative adaptor unit in an exemplary embodiment of the present invention;

Fig. 4c illustrates another adapter unit in an exemplary embodiment of the present invention;

Fig. 4d illustrates yet another alternative adapter unit in an exemplary embodiment of the present invention;

Fig. 4e illustrates yet another alternative adapter unit in an exemplary embodiment of the present invention;

Fig. 5 illustrates a plurality of uses for the apparatus in an exemplary embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In an exemplary embodiment of the present invention where like numbers represent like elements, the invention is described in the figures. Referring first to Fig. 1, the invention is disclosed therein.

Fig. 1 illustrates the hanging apparatus whereby the apparatus has at least a support means which may be adapted to fit the surface of some predetermined structure. In an exemplary embodiment, the surface may be a wall, such as a garage wall or the like. However, it should be understood that the surface may incorporate a plurality of different surfaces whereby the apparatus may be hung therefrom, such as a wall, wood studs, metal boards, and the like. For illustrative purposes, the surface is illustrated as a wall for simplicity of explanation. The support means is adapted to be removable affixed to the surface such that the support means may be easily placed and removed from the surface. The support means may be integrally connected to a receiving portion. The receiving portion may be adapted to be removable attached to the support means. The support means may have an attachment portion which attaches to the surface. The attachment portion may be a plurality of different attachment portions including screws, hooks, nails, toggle bolts and the like. In an exemplary embodiment, the attachment portion may be adaptable to fit a plurality of different attachments and may be interchangeable with different attachments depending on the need of the individual user. The support means may have a opening adapted to receive the attachment portion whereby the attachment portion may be locked into place within the opening by means of a locking mechanism which may include a tensioner, snap-fit, hook and fastener and the like. As can be appreciated, the individual user may desire a specific attachment portion that they desire to use with a specific surface that they may want to hang something therefrom. The individual user may select an attachment portion and insert the attachment portion into the opening of the support means. Upon insertion of the attachment portion, the individual user may utilize the locking mechanism such as a tensioner to secure the attachment portion into the support means. Once the attachment portion and support means are integrally configured, the apparatus may be placed in a proximity to the surface such as a wall and the attachment portion may penetrate or otherwise attach to the surface to allow the apparatus to hang therefrom.

Figs. 1 and 2 illustrate an adaptor which may be connectively attached to the support means. The adaptor may be configured to be removably attached to the support means in a similar fashion to the connectivity of the attachment portion to the support means. In an exemplary embodiment, support means may have a connection portion which is configured to be mated to the adaptor of the apparatus. In practice, the individual user may select an adaptor from a plurality of different adaptors. In an embodiment, at least a first adaptor may be provided for use by the individual. However, a second adaptor, a third adaptor and a fourth adaptor may also be provided to the individual for selection by the individual depending on the device for which the individual may wish to hang. For example, if an individual user desires to hang a helmet, the individual user may select the third adaptor which may facilitate appropriate hanging of the helmet. Thereby the user will select the third adaptor, and insert the adaptor into the connection portion of the support means. A mating area may be provided to allow for connection portion to combine with the adaptor such that the adaptor and connection portion are sufficiently joined to allow for increase structural support of the helmet being hung. It should be understood that although adaptor is connected to the support means of the apparatus, it is not a permanent connection. After use, the adaptor may be removed from its connection with the support means at the connection portion and may be replaced with the first adaptor which may support another device more adequately than the adaptor. Therefore, it should be understood that the adaptor is an interchangeable piece that may allow for proper configuration of the apparatus for use with a plurality of different items to be hung by the individual user.

Fig. 3 illustrates the adaptor being connected with the support means. The adaptor may be removably attached to the support means whereby the support means has a connection portion which supports connectivity of the adaptor to the support means. The mating area is also illustrated in Fig. 3 whereby in this exemplary embodiment, a slide wedge slot is provided whereby the adaptor may be slotted into the wedge slot. In an exemplary embodiment, the adaptor may have a locking mechanism which may allow for locking of the adaptor to the wedge slot. In order to unlock the adaptor from the wedge slot, the user may utilize a push tab which may allow for release of the adaptor from the wedge slot. Once released, the adaptor may be replaced with a second adap-
tor 17 which may have an alternative configuration more adept to its practical use for hanging a specific device.

FIG. 2 illustrates the support means 3 in combination with the attachment portion 9. As can be seen in the figure, the support means 3 may be configured to removably attach to the attachment portion 9. As further illustrated, a first attachment portion 9 may be provided whereby the attachment portion 9 may have an anchor 45 system whereby the anchor 45 may allow for securement of the apparatus 1 while the anchor 45 distributes the load of the apparatus and the device hung more evenly about the surface 5 wherein the surface 5 is a wall. In another exemplary embodiment (see FIG. 1), a second attachment portion 47 may be provided which may be adapted to allow for securing the apparatus 1 in a wooden surface 5. The present invention contemplates a third attachment portion 49 which may be utilized in conjunction with boards and sheet metal whereby the third attachment portion may have a screw 51 to secure the back side of the sheet metal or board. A fourth attachment portion 53 may be provided in the form of a toggle bolt 57 whereby the toggle bolt 57 portion may be adapted for use with dry wall.

FIG. 4 illustrates the plurality of adaptors 15 including the first adaptor 15, the second adaptor 17, the third adaptor 19 and the fourth adaptor 21. As illustrated previously, the plurality of adaptors 15 may be utilized in conjunction with different sized and dimensioned devices to be hung. As illustrated, the adaptors 15 may have a extension portion 61 which may act as a hook 63 adaptable to hold a device to be hung. FIG. 4e illustrates an extension portion 61 having a singular hook 63. However, FIG. 4f illustrates an extension portion 61 having a first hook 63 and a second hook 65 whereby different articles or device may be hung from the respective hook. For example, a plurality of bags (not shown) may be hung from the first hook 63 and the second hook 65.

FIG. 4c illustrates that the hook may have alternative configurations such that the hook 63 extends in a planar fashion versus in a vertical fashion. FIG. 4d illustrates a further alternative embodiment wherein the hook 63 may extend away from the support means 3 in a vertical fashion such that it extends substantially away from the support means 3 and may accommodate larger items to be hung by an individual. Further, the larger hook 63 may facilitate hanging of larger and heavier items whereby the hook 63 is thicker and more rigid to accommodate same. FIG. 4e illustrates a plurality of hooks, 63,65, with a large base 66 to accommodate larger items.

FIG. 5 illustrates the apparatus 1 in use. For example, the apparatus 1 having a support means 3 and a hook 63 may be utilized to hang certain device such as bicycles from a wall 5. However, it is contemplated that no hook 63 be provided but rather that the attachment portion be comprised of a magnetic attachment 73 which may be attracted to other metal devices to be hung. For example, the magnetic attachment 73 may be applied to various yard tools such as rakes having metal portions which will magnetically attach to the magnetic attachment 73 to facilitate hanging or suspension of the device about the attachment 73. Alternatively, as illustrated in FIG. 5, the attachment portion 75 may have an adhesive thereon whereby the attachment portion may directly and semi-permanently attach to the device to be hung. For example, as illustrated in FIG. 5, the attachment portion may be attached to a motorcycle helmet 29 whereby the attachment portion may stay affixed to the helmet 29 even when the helmet 29 is in use. Whereby when the user desires to hang the helmet 29 after use of same, the user simply inserts the attachment portion into the corresponding support means 1 of the apparatus 1. Similarly, as illustrated in FIG. 5, this same adhesive attachment portion may be adaptable for use with tools, such as drills, saws and the like.

Thus, specific embodiments and applications of modular overhead storage have been disclosed. It should be apparent, however, to those skilled in the art that many more modifications besides those already described are possible without departing from the inventive concepts herein. The inventive subject matter, therefore, is not to be restricted except in the spirit of the appended claims. Moreover, in interpreting both the specification and the claims, all terms should be interpreted in the broadest possible manner consistent with the context. In particular, the terms “comprises” and “comprising” should be interpreted as referring to elements, components, or steps in a non-exclusive manner, indicating that the referenced elements, components, or steps may be present, or utilized, or combined with other elements, components, or steps that are not expressly referenced. Where the specification claims refers to at least one of something selected from the group consisting of A, B, C . . . and N, the text should be interpreted as requiring only one element from the group, not A plus N, or B plus N, etc.

1 claim:
1. An apparatus for use in hanging an article from a surface, the apparatus comprising:
a support means adapted to attach to a surface;
a receiving portion incorporated into the support means; and
an adaptor configured to be removably attached to the support means whereby the adaptor is utilized to hang an article therefrom.

2. The apparatus described in claim 1 wherein said adaptor is receivable into said receiving portion.

3. The apparatus described in claim 1 wherein said adaptor may be configured to support a plurality of differently weighted and dimensioned articles to be hung.

4. The apparatus described in claim 1 wherein said adaptor may be removably attached to the support means and whereby an alternative adaptor may be provided to replace the adaptor.

5. The apparatus described in claim 1 wherein said receiver portion is configured to receive the adaptor whereby a plurality of adaptors may fit into any receiving portion.

6. The apparatus described in claim 1 wherein said support means may allow for hanging of an article to any vertical surface including doors, walls, exterior walls and vehicles.

7. The apparatus described in claim 1 wherein the receiver portion may be constructed integrally in the support means and have a plurality of different configurations to accommodate the adaptor.

8. The apparatus described in claim 1 wherein the adaptor may be constructed in a plurality of different configurations to accommodate straps, nets, tool racks, shelving and the like.

9. The apparatus described in claim 1 wherein the apparatus has a receiver portion configured to receive a plurality of adaptors thereon such that each receiver portion may support a plurality of adaptors and thereby support a plurality of different articles.

10. The apparatus described in claim 1 wherein the apparatus may have a receiver portion connected to an adaptor whereby the adaptor is releasable from the receiver portion when the article is removed from its hang position and whereby the adaptor is removable from the article to be placed on another article to be hung.
11. A method for hanging a device, the method comprising the steps of:
    providing a support means adapted to attach to a surface the support means being removably attachable to a surface;
    providing at least a receiving portion integrally formed in the support means whereby the receiving portion is adapted to receive an attachment portion; and
    providing a plurality of attachment portions whereby an attachment portion is mated to the receiving portion whereby the attachment portion is configurable to hang and article thereon.
12. The method of claim 11, wherein the surface is a wall.
13. The method of claim 11, further comprising the step of:
    applying an adhesive to the attachment portion whereby the attachment portion may be substantially permanently affixed to an article to be hung.
14. The method of claim 11 further comprising the step of:
    inserting the attachment portion into the receiving portion of the support means for connectivity of the attachment portion to the support means.
15. The method of claim 11 further comprising the step of:
    providing a plurality of adaptors which may be configured for facilitating the hanging of a plurality of devices whereby the adaptors may be received by the receiving portion.
16. The method of claim 11 further comprising the step of:
    providing a locking mechanism on the attachment portion to allow for securement of the attachment portion about the receiving portion and further allowing for release of the attachment portion from the receiving portion of the apparatus.
17. The method of claim 11 further comprising the step of:
    allowing for removal and replacement of the adaptor from the receiving portion such that the adaptor may be removed and replaced with a more suitable adaptor for use.