METHOD AND SYSTEM FOR ANCHORING UMBRELLAS AND THE LIKE

RELATED APPLICATIONS

[001] This application claims the priority of Australian Provisional Patent Application No. 2024900282in the name of Ezy Hold Pty Ltd, which was filed on 7 February 2024, entitled "*Method and System for Anchoring Umbrellas and the Like*" and the specification thereof is incorporated herein by reference in its entirety and for all purposes.

FIELD OF INVENTION

[002] The present invention relates to the field of anchoring and stabilizing umbrellas, canopies, and the like. Hereafter the invention is described in relation to stands for large umbrellas or canopies which are intended to provide shade or shelter from rain. However, it should be appreciated that the present invention is not limited to that use only.

BACKGROUND ART

Throughout this specification the use of the word "inventor" in singular form may be taken as reference to one (singular) inventor or more than one (plural) inventor of the present invention.

[003] The discussion throughout this specification comes about due to the realisation of the inventor and/or the identification of certain related art problems by the inventor and, moreover, any discussion of documents, devices, acts or knowledge in this specification is included to explain the context of the invention. It should not be taken as an admission that any of the material forms a part of the prior art base or the common general knowledge in the relevant art in Australia or elsewhere on or before the priority date of the disclosure and claims herein.

[004] Umbrellas exist in sizes and constructions which range from hand-held, light-weight paper parasols to large, to mid-size beach umbrellas to umbrellas with large, heavy canopies for sheltering areas such as outdoor dining tables.

[005] Such mid-to-large size umbrellas are relatively heavy and require firm anchoring to ensure against falling under their own weight and so potentially causing injury to people and damage to property. Umbrellas with larger canopies are additionally susceptible to being blown over, or to being lifted, by winds.

[006] In beach umbrellas, the canopy is usually mounted at the upper end of a sharpened pole, so that the umbrella can be stabilized by driving the sharpened end of the pole into the sand of a beach.

[007] In larger umbrellas, such as are used for sheltering an outdoor dining or recreational area, the canopy can be fixed at one end of the pole, and the pole can have a flat base at the other end. Such umbrellas can be stabilized by placing weights, such as metal weights or bags of sand or lead shot, on the metal base to weigh down the umbrella. Such methods of stabilizing umbrellas have the disadvantages that they necessitate the handling of heavy weights or bags, and they do not reliably provide stabilization against wind gusts or against inadvertent mechanical impacts.

SUMMARY OF INVENTION

[008] An object of the present invention is to alleviate at least one disadvantage associated with the related art.

[009] Accordingly, in a first aspect of embodiments of the invention described herein, there is provided a support system for the stabilizing of umbrellas and the like, the umbrella or the like comprising a mounting pole, the support system comprising a housing and a sleeve,

the housing comprising:

a tubular body having an opening at the top for receipt of the sleeve therein;

a door at the top of the body which is movable between a position in which it occludes the opening and a position in which it permits the insertion of the sleeve into the housing;

at least one aperture penetrating the door to receive a threaded bolt or the like; and

mountings for mounting the housing to a structure, and

the sleeve comprising:

a tubular body for insertion into the tubular body of the housing; and

at least one threaded bore through a wall of the tubular body of the sleeve to receive a threaded bolt or the like therethrough.

[0010] It is preferred that the housing of the support system further comprises a substantially planar plate at the top of the tubular body of the housing, the top plate having apertures through it for receipt of fixing screws or the like.

[0011] It is preferred that the housing of the support system further comprises at least one flange extending from it, each flange having at least one aperture through it for the receipt of fixing screws and the like.

[0012] It is preferred that the housing of the support system further comprises a tile surrounded at the upper end for the receipt therein of a flooring tile or the like.

[0013] It is preferred that the tubular body of the housing has at least one aperture through a wall for the receipt of fixing screws or the like.

[0014] It is preferred that the tubular body of the housing is substantially rectangular in cross-section.

[0015] It is preferred that the door at the top of the body is hingedly connected, directly or indirectly, to the housing to enable the door to move between the position in which it occludes the opening and the position in which it permits the insertion of the sleeve into the housing.

[0016] It is preferred that the tubular sleeve of the support system is substantially cylindrical.

[0017] It is preferred that the threaded bores through the wall of the tubular body of the sleeve are substantially vertically aligned.

[0018] In a second aspect of embodiments of the invention described herein, there is provided a kit of parts for assembly into the support system of the first aspect of the present invention.

[0019] It is preferred that the kit of parts further comprises a set of bolts which are adapted for receipt by the threaded bores.

[0020] In another aspect of embodiments of the invention described herein, there is provided a housing of the support system of the first aspect of the present invention.

[0021] In another aspect of embodiments of the invention described herein, there is provided a sleeve of the support system of the first aspect of the present invention.

[0022] Further scope of applicability of embodiments of the present invention will become apparent from the detailed description given hereinafter. However, it should be understood that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the disclosure herein will become apparent to those skilled in the art from this detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] Further disclosure, objects, advantages, and aspects of preferred and other embodiments of the present invention may be better understood by those skilled in the relevant art by reference to the following description of embodiments taken in conjunction with the accompanying drawings, which are given by way of illustration only, and thus are not limitative of the disclosure herein, and in which:

Figure 1 is a pictorial view of apparatus according to one embodiment of the invention;

Figure 2 is an exploded view of the apparatus of Figure 1;

Figure 3 is a top plan view of the apparatus of Figure 1;

Figure 4 is a view from the bottom of the apparatus of Figure 1;

Figure 5 is a side view of the apparatus of Figure 1;

Figure 6 is a side view from another side of the apparatus of Figure 1;

Figure 7 is a cross-sectional view on the line A-A of figure 3;

Figure 8 is an isometric view of a component of the apparatus of Figure 1, with the apparatus in one configuration;

Figure 9 is an isometric view of the apparatus of Figure 1, with the apparatus in another configuration;

Figure 10 is an exploded isometric view of apparatus according to another embodiment of the invention;

Figure 11 is a side view of a component of the apparatus of Figure 10;

Figure 12 is a cross-sectional view on the line B-B of Figure11;

Figure 13 is a pictorial view of apparatus according to another embodiment of the invention;

Figure 14 is an exploded view of the apparatus of Figure 13;

Figure 15 is a top plan view of the apparatus of Figure 13;

Figure 16 is a view from the bottom of the apparatus of Figure 13;

Figure 17is a side view of the apparatus of Figure 13;

Figure 18 is a side view from another side of the apparatus of Figure 13;

Figure 19 is a cross-sectional view on the line C-C of figure 15;

Figure 20 is an isometric view of a component of the apparatus of Figure 13, with the apparatus in one configuration;

Figure 21 is an isometric view of the apparatus of Figure 13, with the apparatus in another configuration;

Figure 22 is an exploded isometric view of apparatus according to another embodiment of the invention;

Figure 23 is a side view of a component of the apparatus of Figure 22;

Figure 24 is a cross-sectional view on the line D-D of Figure 23;

Figure 25 is a first isometric view of a component of apparatus according to a further embodiment of the invention;

Figure 26 is a first side view of the component of Figure 25;

Figure 27 is an isometric view in bottom perspective of the component of Figure 25;

Figure 28 is a top plan view of the component of Figure 25;

Figure 29 is a second side view of the component of Figure 25;

Figure 30 is a view from the bottom of the component of Figure 25;

Figure 31 is a second isometric view of the component of Figure 25;

Figure 32 is a third side view of the component of Figure 25;

Figure 33 is a second isometric view of the component of Figure 25 in bottom perspective with inset B showing enlarged detail of the component;

Figure 34 is a top plan view of the component of Figure 25 with sectional view showing further components of the apparatus inserted therein;

Figure 35 is a first side view of the components of Figure 34;

Figure 36 is a second side view of the components of Figure 34; and

Figure 37 is a third side view of the components of Figure 34;

DETAILED DESCRIPTION

[0024] Component List for Reference to Drawings:

1. support assembly

2. sleeve
3. housing
4. top plate of housing 3
5. (reserved)
6. door
7. pole or shaft of umbrella or the like
8. hinge plate of housing 3
9. spacer plate of housing 3
10. aperture in the top plate 4
11. body of housing 3
12. bottom-plate of housing 3
13. mounting flange of bottom-plate 12
14. fixing holes in top plate 4
15. (reserved)
16. fixing hole in body 11 of housing 3
17. fixing holes in mounting flanges 13
18. threaded bores in sleeve 2
19. retaining bolts
20. aperture through door 6
21. head of retaining bolts 19
22. tile
23. tile surround in the form of a pan for receipt of tile 22
24. assembly pan
25. welded seams
26. offset centre cutout
27. top plate weld points
28. door offset
141. slotted fixing holes
142. assembly pan slots
201. slotted aperture

[0025] The embodiments of the invention which are illustrated in Figures 1 to 12 are particularly suited for mounting on decking, a timber floor, or the like. According to this embodiment of the invention, a support system 1 for an umbrella or the like has a sleeve

2 for receipt within a housing 3. The sleeve 2 comprises a hollow cylinder or other hollow tube for receipt of a pole 7 of the umbrella or the like.

[0026] The housing 3 has a top plate 4 which has an aperture 10 through it, and a hinge plate 8 directly beneath top plate 4 for the mounting of a hinged door 6. The hinged door 6 is movable between a "closed" position in which it occludes the aperture 10 in the top plate 4 and an "open" position which enables the insertion of the sleeve 2 through the aperture 10 for receipt within the housing 3. The top plate 4 has one or more mounting holes 14 through it to fixing the housing 3 to a floor, deck, or the like to facilitate restraint against lateral and/or vertical movement of the housing 3.

[0027] The door 6 has an aperture through it for the passage therethrough of a bolt or the like, as described in detail below.

[0028] The housing has a spacer plate 9 which, in turn, is directly beneath the hinge plate. The hinge plate 8 and the spacer plate 9 also have apertures through them to enable the insertion of the sleeve 2 into the housing 3.

[0029] The housing 3 has a bottom plate 12 which substantially occludes the bottom of the body 11. The bottom plate 12 carries an upwards-extending, substantially plate-like, flange 13 which extends beyond the body 11 and which carries holes 17 for fixing the housing 3 to an adjacent timber or like structure of a floor, deck, or the like to facilitate restraint against lateral and/or vertical movement of the housing 3.

[0030] Threaded bores 18 are preferably vertically aligned and pass through the wall of the sleeve 2 for the receipt of retaining bolts 19 which have heads 21. At least one bolt 19 passes through both the aperture 20 in the door 6 and a threaded bore 18 of the sleeve 2 to frictionally bear against the umbrella pole 7. This arrangement of facilitates against vertical and/or lateral movement of both the sleeve 2 and the pole 7 relative to the housing 3.

[0031] At least other retaining bolts 19 may be provided to pass through the threaded bores 18 in the sleeve 2 to frictionally bear against the sleeve 2, to facilitate against vertical movement of the pole 7 relative to the sleeve 2.

[0032] The support assembly of the present invention, and its components, can be manufactured using any suitable metal or plastics material. Preferred metals include steel

and aluminium alloys. Preferred plastics materials include ABS (acrylonitrile butadiene styrene) plastics. Fabrication of components will depend on the material used. For example, at least a portion of the housing can be injection moulded from plastics material or from aluminium alloy. The tubular body of the sleeve can be produced by cutting stock tubing to length and drilling and tapping bores through it.

[0033] The embodiment of the invention that is illustrated in Figure 10 is a variant of the embodiments of figures 1 to 9, and is adapted to provide a tile surround. The embodiment of Figure 10 has a tile surround 23 mounted at the top of the housing body 11 for the receipt of a tile 22 when the housing is not in use (that is, when the housing 3 does not have a sleeve 2 mounted in it). The tile surround 23 is held in place by an assembly pan 24, which in turn is connected to the tile surround 23 by using bolts or the like that pass through aligned holes in the assembly pan 24, and in the top plate 4.

[0034] The embodiments of the invention which are illustrated in Figures 13 to 24 are particularly suited for mounting into a pavement or the like. According to this embodiment of the invention, the bottom plate 12 of the housing 3 does not carry the upwards-extending, substantially plate-like, flange 13 of Figures 1 to 12.

[0035] It will accordingly be seen that the presently-described embodiment of the invention provides a support for umbrellas, canopies, and mountable objects. It has a fixed support to provide lateral and uplift anchoring of mountable objects providing lateral and up lift anchoring to the mountable objects. It provides a housing that can be either screwed or embedded into or below a surface which then allows for a sleeve to be inserted, bolted to the lid of the casing and protrude about the surface. This provides rigidity because the sleeve it is fixed to the casing lid to stop any lateral movement or up lift.

[0036] Embodiments of the invention remove the need for conventional heavy umbrella bases and weights that keep them upright in moderate lateral and/or uplift forces (such as wind). Once the housing is either fixed to a structure or embedded into concrete, the sleeve can be inserted and attached to the lid of the casing, this will stop the need for heavy weights and umbrella bases. When demounting the umbrella or the like, it is simply a matter of undoing the retaining bolts, removing the sleeve, and closing the lid. The lid is then flush with the surrounding surface and is not a trip hazard. It is not necessary to provide heavy bases or weights to stabilize the mounting of the umbrella or the like.

[0037] In another embodiment of the invention, a support system has the option to be tied or pinned down in strong winds, which can move objects around and/or cause them to become projectiles and cause damage to buildings and/or harm to people. In this respect, the housing is adapted for insertion of a steel rod or bolt through the housing which is preferably about 50mm below the top of the housing and can be tied to a steel mesh that is used to strengthen concrete. See the fixing hole in body 11 of housing 3 marked as item 16 on the drawings, which accommodate insertion of a steel rod or bolt through the housing 3. This will mean that for the support system to be forced out of its anchoring it will require the concrete and/or steel reinforcing to give way or move.

[0038] With reference to Figures 25 to 37 a further embodiment of the invention is provided. As shown in the side views of Figures 26, 29, 32, 35, 36 and 37 welded seams are provided on at least one side of the body housing component 11. As shown in Figure 33 an offset centre cutout 26 is provided in the assembly pan which has increased dimension providing ability to offset at about 1mm for improved fitment of components on assembly. Asa shown by inset B of Figure 33, slotted fixing holes 141 can align with assembly pan slots 142, which provide a slotted undertray for improved fitment of assembled components. Further to this, the assembly pan has increased depth, preferably about 24-25mm, to allow for position or depth of the inner tile tray as it were to be under flush avoiding any tripping hazards and this is borne out and shown in the side views of Figures 26, 29 and 32, for example. As shown in Figure 36 a door offset 28 is provided in which an offset of about 2.5mm if provided from the outside of a hinge rod to the end of the door 6. Referring to Figure 34 a slotted aperture 201 is shown. This is a slotted opening in the door 6 for improved alignment with retaining bolts 19 of sleeve 2. Top plate weld points 27 are provided for clearance of the assembly pan 24.

[0039] While this invention has been described in connection with specific embodiments thereof, it will be understood that it is capable of further modification(s). This application is intended to cover any variations uses or adaptations of the invention following in general, the principles of the invention and including such departures from the present disclosure as come within known or customary practice within the art to which the invention pertains and as may be applied to the essential features hereinbefore set forth.

[0040] As the present invention may be embodied in several forms without departing from the spirit of the essential characteristics of the invention, it should be understood that

the above described embodiments are not to limit the present invention unless otherwise specified, but rather should be construed broadly within the spirit and scope of the invention as defined in the appended claims. The described embodiments are to be considered in all respects as illustrative only and not restrictive.

[0041] Various modifications and equivalent arrangements are intended to be included within the spirit and scope of the invention and appended claims. Therefore, the specific embodiments are to be understood to be illustrative of the many ways in which the principles of the present invention may be practiced. In the following claims, any means-plus-function clauses are intended to cover structures as performing the defined function and not only structural equivalents, but also equivalent structures. For example, although a nail and a screw may not be structural equivalents in that a nail employs a cylindrical surface to secure wooden parts together, whereas a screw employs a helical surface to secure wooden parts together, in the environment of fastening wooden parts, a nail and a screw are equivalent structures.

The following sections I – VII provide a guide to interpreting the present specification.

I. Terms

[0042] The term "product" means any machine, manufacture and/or composition of matter, unless expressly specified otherwise.

[0043] The term "process" means any process, algorithm, method or the like, unless expressly specified otherwise.

[0044] Each process (whether called a method, algorithm or otherwise) inherently includes one or more steps, and therefore all references to a "step" or "steps" of a process have an inherent antecedent basis in the mere recitation of the term 'process' or a like term. Accordingly, any reference in a claim to a 'step' or 'steps' of a process has sufficient antecedent basis.

[0045] The term "invention" and the like mean "the one or more inventions disclosed in this specification", unless expressly specified otherwise.

[0046] The terms "an embodiment", "embodiment", "embodiments", "the embodiment", "the embodiments", "one or more embodiments", "some embodiments", "certain

embodiments", "one embodiment", "another embodiment" and the like mean "one or more (but not all) embodiments of the disclosed invention(s)", unless expressly specified otherwise.

[0047] The term "variation" of an invention means an embodiment of the invention, unless expressly specified otherwise.

[0048] A reference to "another embodiment" in describing an embodiment does not imply that the referenced embodiment is mutually exclusive with another embodiment (e.g., an embodiment described before the referenced embodiment), unless expressly specified otherwise.

[0049] The terms "including", "comprising" and variations thereof mean "including but not limited to", unless expressly specified otherwise.

[0050] The terms "a", "an" and "the" mean "one or more", unless expressly specified otherwise.

[0051] The term "plurality" means "two or more", unless expressly specified otherwise.

[0052] The term "herein" means "in the present specification, including anything which may be incorporated by reference", unless expressly specified otherwise.

[0053] The phrase "at least one of", when such phrase modifies a plurality of things (such as an enumerated list of things), means any combination of one or more of those things, unless expressly specified otherwise. For example, the phrase "at least one of a widget, a car and a wheel" means either (i) a widget, (ii) a car, (iii) a wheel, (iv) a widget and a car, (v) a widget and a wheel, (vi) a car and a wheel, or (vii) a widget, a car and a wheel. The phrase "at least one of", when such phrase modifies a plurality of things, does not mean "one of each of" the plurality of things.

[0054] Numerical terms such as "one", "two", etc. when used as cardinal numbers to indicate quantity of something (e.g., one widget, two widgets), mean the quantity indicated by that numerical term, but do not mean at least the quantity indicated by that numerical term. For example, the phrase "one widget" does not mean "at least one widget", and therefore the phrase "one widget" does not cover, e.g., two widgets.

[0055] The phrase "based on" does not mean "based only on", unless expressly specified otherwise. In other words, the phrase "based on" describes both "based only on" and "based at least on". The phrase "based at least on" is equivalent to the phrase "based at least in part on".

[0056] The term "represent" and like terms are not exclusive, unless expressly specified otherwise. For example, the term "represents" do not mean "represents only", unless expressly specified otherwise. In other words, the phrase "the data represents a credit card number" describes both "the data represents only a credit card number" and "the data represents a credit card number and the data also represents something else".

[0057] The term "whereby" is used herein only to precede a clause or other set of words that express only the intended result, objective or consequence of something that is previously and explicitly recited. Thus, when the term "whereby" is used in a claim, the clause or other words that the term "whereby" modifies do not establish specific further limitations of the claim or otherwise restricts the meaning or scope of the claim.

[0058] The term "e.g." and like terms mean "for example", and thus does not limit the term or phrase it explains. For example, in the sentence "the computer sends data (e.g., instructions, a data structure) over the Internet", the term "e.g." explains that "instructions" are an example of "data" that the computer may send over the Internet, and also explains that "a data structure" is an example of "data" that the computer may send over the Internet. However, both "instructions" and "a data structure" are merely examples of "data", and other things besides "instructions" and "a data structure" can be "data".

[0059] The term "i.e." and like terms mean "that is", and thus limits the term or phrase it explains. For example, in the sentence "the computer sends data (i.e., instructions) over the Internet", the term "i.e." explains that "instructions" are the "data" that the computer sends over the Internet.

[0060] Any given numerical range shall include whole and fractions of numbers within the range. For example, the range "1 to 10" shall be interpreted to specifically include whole numbers between 1 and 10 (e.g., 2, 3, 4, . . . 9) and non-whole numbers (e.g., 1.1, 1.2, . . . 1.9).

II. Determining

[0061] The term "determining" and grammatical variants thereof (e.g., to determine a price, determining a value, determine an object which meets a certain criterion) is used in an extremely broad sense. The term "determining" encompasses a wide variety of actions and therefore "determining" can include calculating, computing, processing, deriving, investigating, looking up (e.g., looking up in a table, a database or another data structure), ascertaining and the like. Also, "determining" can include receiving (e.g., receiving information), accessing (e.g., accessing data in a memory) and the like. Also, "determining" can include resolving, selecting, choosing, establishing, and the like.

[0062] The term "determining" does not imply certainty or absolute precision, and therefore "determining" can include estimating, extrapolating, predicting, guessing and the like.

[0063] The term "determining" does not imply that mathematical processing must be performed, and does not imply that numerical methods must be used, and does not imply that an algorithm or process is used.

[0064] The term "determining" does not imply that any particular device must be used. For example, a computer need not necessarily perform the determining.

III. Indication

[0065] The term "indication" is used in an extremely broad sense. The term "indication" may, among other things, encompass a sign, symptom, or token of something else.

[0066] The term "indication" may be used to refer to any indicia and/or other information indicative of or associated with a subject, item, entity, and/or other object and/or idea.

[0067] As used herein, the phrases "information indicative of" and "indicia" may be used to refer to any information that represents, describes, and/or is otherwise associated with a related entity, subject, or object.

[0068] Indicia of information may include, for example, a symbol, a code, a reference, a link, a signal, an identifier, and/or any combination thereof and/or any other informative representation associated with the information.

[0069] In some embodiments, indicia of information (or indicative of the information) may be or include the information itself and/or any portion or component of the information.

In some embodiments, an indication may include a request, a solicitation, a broadcast, and/or any other form of information gathering and/or dissemination.

IV. Forms of Sentences

[0070] Where a limitation of a first claim would cover one of a feature as well as more than one of a feature (e.g., a limitation such as "at least one widget" covers one widget as well as more than one widget), and where in a second claim that depends on the first claim, the second claim uses a definite article "the" to refer to the limitation (e.g., "the widget"), this does not imply that the first claim covers only one of the feature, and this does not imply that the second claim covers only one of the feature (e.g., "the widget" can cover both one widget and more than one widget).

[0071] When an ordinal number (such as "first", "second", "third" and so on) is used as an adjective before a term, that ordinal number is used (unless expressly specified otherwise) merely to indicate a particular feature, such as to distinguish that particular feature from another feature that is described by the same term or by a similar term. For example, a "first widget" may be so named merely to distinguish it from, e.g., a "second widget". Thus, the mere usage of the ordinal numbers "first" and "second" before the term "widget" does not indicate any other relationship between the two widgets, and likewise does not indicate any other characteristics of either or both widgets. For example, the mere usage of the ordinal numbers "first" and "second" before the term "widget" (1) does not indicate that either widget comes before or after any other in order or location; (2) does not indicate that either widget occurs or acts before or after any other in time; and (3) does not indicate that either widget ranks above or below any other, as in importance or quality. In addition, the mere usage of ordinal numbers does not define a numerical limit to the features identified with the ordinal numbers. For example, the mere usage of the ordinal numbers "first" and "second" before the term "widget" does not indicate that there must be no more than two widgets.

[0072] When a single device or article is described herein, more than one device/article (whether or not they cooperate) may alternatively be used in place of the single device/article that is described. Accordingly, the functionality that is described as being possessed by a device may alternatively be possessed by more than one device/article (whether or not they cooperate).

[0073] Similarly, where more than one device or article is described herein (whether or not they cooperate), a single device/article may alternatively be used in place of the more than one device or article that is described. For example, a plurality of computer-based devices may be substituted with a single computer-based device. Accordingly, the various functionality that is described as being possessed by more than one device or article may alternatively be possessed by a single device/article.

[0074] The functionality and/or the features of a single device that is described may be alternatively embodied by one or more other devices which are described but are not explicitly described as having such functionality/features. Thus, other embodiments need not include the described device itself, but rather can include the one or more other devices which would, in those other embodiments, have such functionality/features.

V. Disclosed Examples and Terminology Are Not Limiting

[0075] Neither the Title nor the Abstract in this specification is intended to be taken as limiting in any way as the scope of the disclosed invention(s). The title and headings of sections provided in the specification are for convenience only, and are not to be taken as limiting the disclosure in any way.

[0076] Numerous embodiments are described in the present application, and are presented for illustrative purposes only. The described embodiments are not, and are not intended to be, limiting in any sense. The presently disclosed invention(s) are widely applicable to numerous embodiments, as is readily apparent from the disclosure. One of ordinary skill in the art will recognise that the disclosed invention(s) may be practised with various modifications and alterations, such as structural modifications. Although particular features of the disclosed invention(s) may be described with reference to one or more particular embodiments and/or drawings, it should be understood that such features are not limited to usage in the one or more particular embodiments or drawings with reference to which they are described, unless expressly specified otherwise.

[0077] The present disclosure is not a literal description of all embodiments of the invention(s). Also, the present disclosure is not a listing of features of the invention(s) which must be present in all embodiments.

[0078] A description of an embodiment with several components or features does not imply that all or even any of such components/features are required. On the contrary, a

variety of optional components are described to illustrate the wide variety of possible embodiments of the present invention(s). Unless otherwise specified explicitly, no component/feature is essential or required.

[0079] Although process steps, operations, or the like may be described in a particular sequential order, such processes may be configured to work in different orders. In other words, any sequence or order of steps that may be explicitly described does not necessarily indicate a requirement that the steps be performed in that order. The steps of processes described herein may be performed in any order practical. Further, some steps may be performed simultaneously despite being described or implied as occurring non-simultaneously (e.g., because one step is described after the other step). Moreover, the illustration of a process by its depiction in a drawing does not imply that the illustrated process is exclusive of other variations and modifications thereto, does not imply that the illustrated process or any of its steps are necessary to the invention(s), and does not imply that the illustrated process is preferred.

[0080] Although a process may be described as including a plurality of steps, that does not imply that all or any of the steps are preferred, essential or required. Various other embodiments within the scope of the described invention(s) include other processes that omit some or all of the described steps. Unless otherwise specified explicitly, no step is essential or required.

[0081] Although a process may be described singly or without reference to other products or methods, in an embodiment the process may interact with other products or methods. For example, such interaction may include linking one business model to another business model. Such interaction may be provided to enhance the flexibility or desirability of the process.

[0082] Although a product may be described as including a plurality of components, aspects, qualities, characteristics and/or features, that does not indicate that any or all of the plurality are preferred, essential or required. Various other embodiments within the scope of the described invention(s) include other products that omit some or all of the described plurality.

[0083] An enumerated list of items (which may or may not be numbered) does not imply that any or all of the items are mutually exclusive, unless expressly specified otherwise.

Likewise, an enumerated list of items (which may or may not be numbered) does not imply that any or all of the items are comprehensive of any category, unless expressly specified otherwise. For example, the enumerated list "a sleeve, a housing, a plate" does not imply that any or all of the three items of that list are mutually exclusive and does not imply that any or all of the three items of that list are comprehensive of any category.

[0084] An enumerated list of items (which may or may not be numbered) does not imply that any or all of the items are equivalent to each other or readily substituted for each other.

[0085] All embodiments are illustrative, and do not imply that the invention or any embodiments were made or performed, as the case may be.

[0086] "Comprises/comprising" and "includes/including" when used in this specification is taken to specify the presence of stated features, integers, steps or components but does not preclude the presence or addition of one or more other features, integers, steps, components or groups thereof. Thus, unless the context clearly requires otherwise, throughout the description and the claims, the words 'comprise', 'comprising', 'includes', 'including' and the like are to be construed in an inclusive sense as opposed to an exclusive or exhaustive sense; that is to say, in the sense of "including, but not limited to".

CLAIMS

1. A support system for the stabilizing of umbrellas and the like, the umbrella or the like comprising a mounting pole, the support system comprising a housing and a sleeve,

   the housing comprising:

   a tubular body having an opening at the top for receipt of the sleeve therein;

   a door at the top of the body which is movable between a position in which it occludes the opening and a position in which it permits the insertion of the sleeve into the housing;

   an aperture penetrating the door to receive a threaded bolt or the like; and

   mountings for mounting the housing to a structure, and

   the sleeve comprising:

   a tubular body for insertion into the tubular body of the housing; and

   at least one threaded bore through a wall of the tubular body of the sleeve to receive a threaded bolt or the like therethrough.

2. A support system as claimed in claim 1, in which the housing further comprises a substantially planar plate at the top of the tubular body of the housing, the top plate having apertures through it for receipt of fixing screws or the like.

3. A support system as claimed in claim 1 or claim 2, in which the housing further comprises at least one flange extending from it, each flange having at least one aperture through it for the receipt of fixing screws and the like.

4. A support system as claimed in any one of the preceding claims, in which the housing further comprises a tile surrounded at the upper end for the receipt therein of a flooring tile or the like.

5. A support system as claimed in any one of the preceding claims, in which the tubular body of the housing has at least one aperture through a wall for the receipt of fixing screws or the like.

6. A support system as claimed in any one of the preceding claims, in which the tubular body of the housing is substantially rectangular in cross-section.

7. A support system as claimed in any one of the preceding claims, in which the door at the top of the body is hingedly connected, directly or indirectly, to the housing to enable the door to move between the position in which it occludes the opening and the position in which it permits the insertion of the sleeve into the housing.

8. A support system as claimed in any one of the preceding claims, in which the tubular sleeve is substantially cylindrical.

9. A support system as claimed in any one of the preceding claims, in which the threaded bores through the wall of the tubular body of the sleeve are substantially vertically aligned.

10. A kit of parts for assembly into the support system of any one of the preceding claims.

11. A kit of parts as claimed in claim 9, further comprising a set of bolts which are adapted for receipt by the threaded bores.

12. The housing of the support system of any one of claims 1 to 9.

13. The sleeve of the support system of any one of claims 1 to 9.