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(57) **ABSTRACT**

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The present invention relates generally to an anchoring device for a deck or dock or similar structure. More particularly, the invention encompasses a device and an apparatus for securing items to a structure that has an opening for accommodating the inventive anchoring device. The invention further includes options for different configurations for a tying device. The inventive device can be made with a rust resistant material or could be coated with a material to prevent corrosion of the invention and extend the life of the anchoring device.

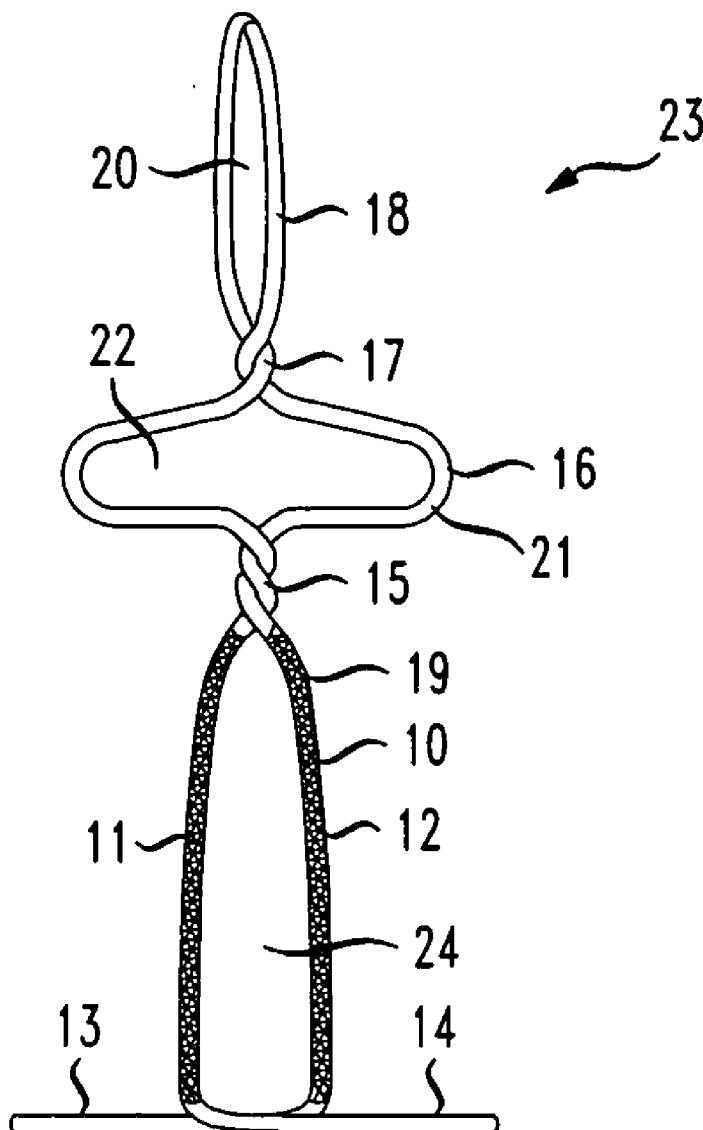
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FIG. 1

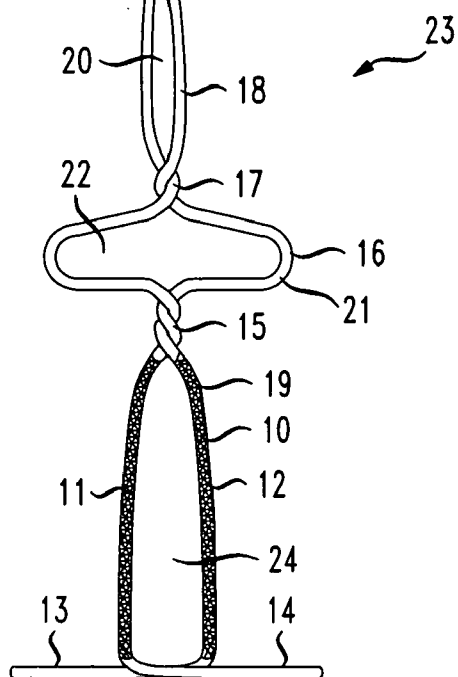


FIG. 2

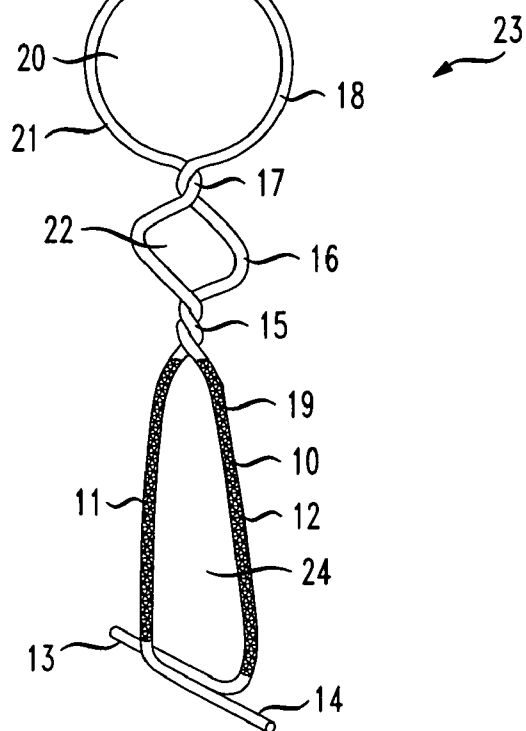


FIG. 4

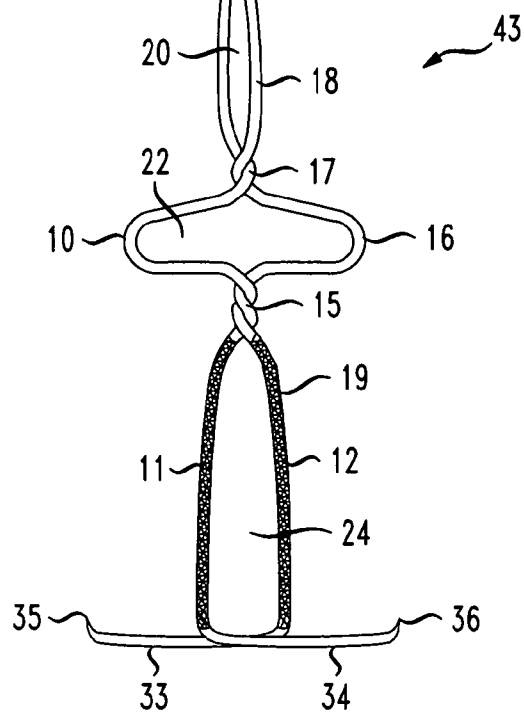
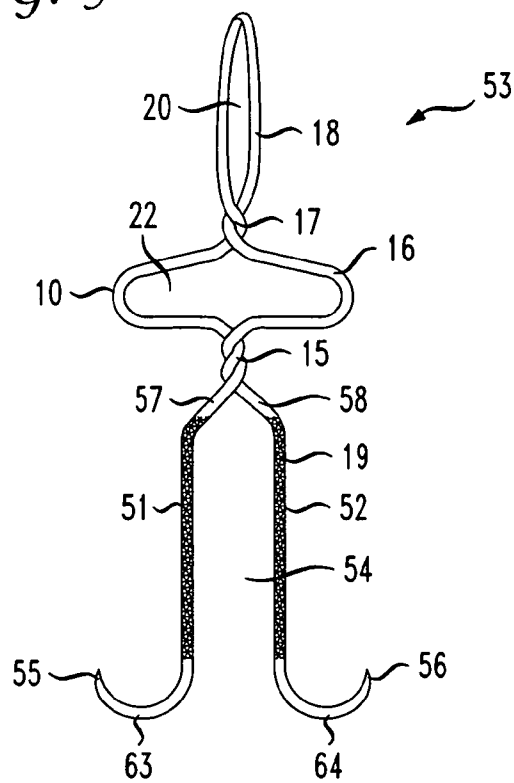
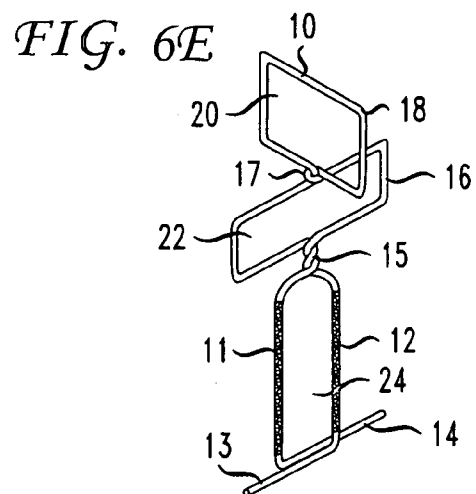
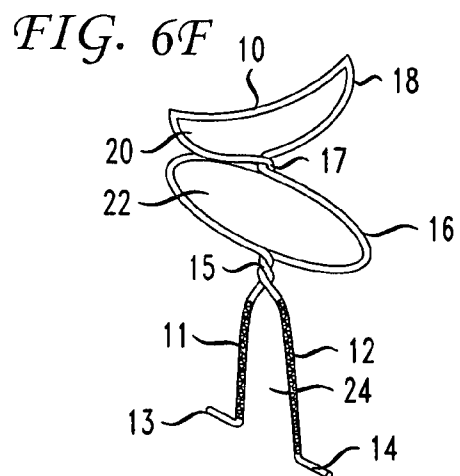
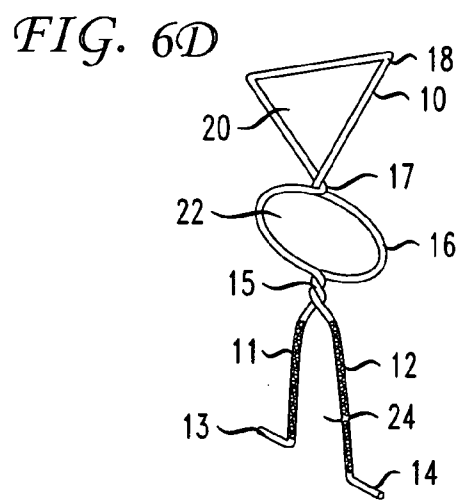
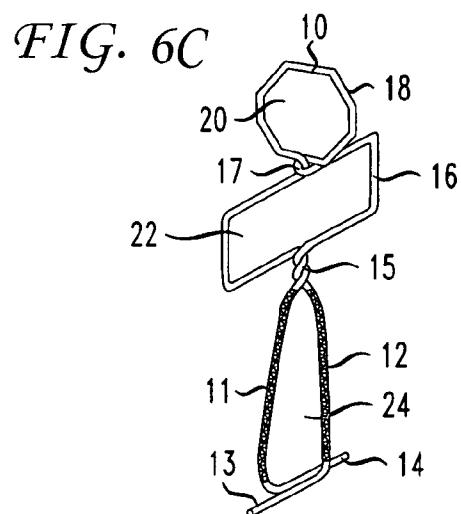
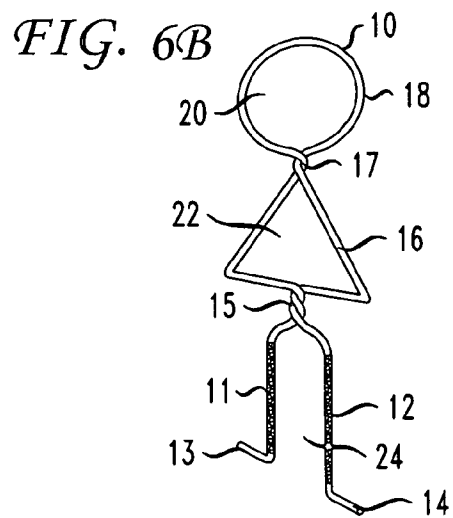
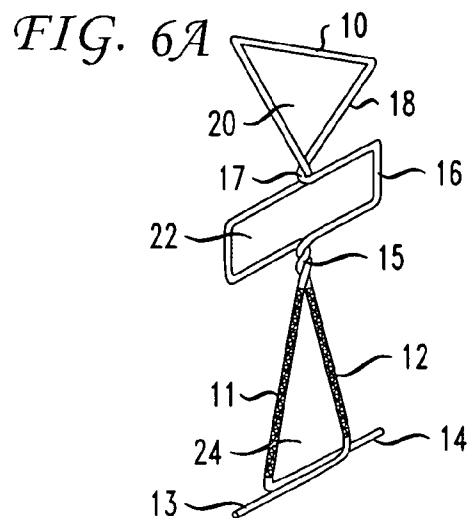


FIG. 5





DECK TIE AND METHOD THEREOF

FIELD OF THE INVENTION

[0001] The present invention relates generally to an anchoring device for a deck or dock or similar structure. More particularly, the invention encompasses a device and an apparatus for securing items to a structure that has an opening for accommodating the inventive anchoring device. The invention further includes options for different configurations for a tying device. The inventive device can be made with a rust resistant material or could be coated with a material to prevent corrosion of the invention and extend the life of the anchoring device. A method of making said anchoring device is also disclosed.

BACKGROUND INFORMATION

[0002] There are many times when there is a need to protect and/or secure an item and both the people and the manufacturers have used different types of innovations to protect and/or secure an item. One simple example, could be a person pounding and securing a nail in a fixed structure and tying one end of a rope or a string to the secured nail and the other end to item to be secured. Another example could be where a dog owner may secure one end of a leash to a fixed structure and the other end to the dog's collar.

[0003] The prior art is also replete with inventive devices and/or apparatuses that allow an item to be properly secured. For example, U.S. Pat. No. 4,007,563 (Nakagawa) relates to a deck anchor, and more specifically, the invention relates to a deck anchor for securing in a hole in a metal plate in concrete building structures and having a stem with a connector at one end, and an assembly slide-able in the stem and urged by a spring loading towards the connector.

[0004] U.S. Pat. No. 5,730,245 (Conway) relates to the field of safety cable deck anchors, and in particular, to the use of anchor for safety cables which can be attached to the framing of the floor as it is built, and wherein these anchors can be removed and re-used after the floor is completed.

[0005] U.S. Pat. No. 6,241,440 (Orlebeke) discloses a device for tethering a fitting to a flat surface, where the tethering device provides for a low profile tether anchor, for rotation of the loop made with fibrous material, and is water tight to prevent water flow through the tethering device.

[0006] U.S. Pat. No. 6,928,671 (Pagano et al.) discloses a tie down assembly for pool covers and pool cover incorporating the same.

[0007] However, the prior art has not addressed the problem of quick install and release of an anchoring device or securely fastening an anchoring device to a preexisting opening, to name a few.

[0008] This invention overcomes many of the problems of the prior art. For example, this invention provides a quick install and release of an anchoring device. Furthermore, this invention provides the option of securely fastening an anchoring device to a preexisting opening.

PURPOSES AND SUMMARY OF THE INVENTION

[0009] This invention is a novel anchoring device and apparatus.

[0010] Therefore, one purpose of this invention is to provide an anchoring device which can be quickly installed and quickly released.

[0011] Another purpose of this invention is to provide an anchoring device which can be inserted into a preexisting opening and secured therein.

[0012] Yet another purpose of the present invention is to provide a new anchoring device for the purpose of securing objects to a deck or a dock or a similar structure.

[0013] Still yet another purpose of the present invention is to provide a new anchoring device that is of durable and reliable construction.

[0014] Yet another purpose of the present invention is to provide a new anchoring device which may be easily and efficiently manufactured.

[0015] Still yet another purpose of the present invention is to provide a new anchoring device which provides in the apparatuses and methods of the prior art some of the advantages thereof, while simultaneously overcoming some of the disadvantages normally associated therewith.

[0016] Still yet another purpose of the present invention is to provide a new anchoring device that is easily attached to and easily unattached to a deck or a dock or a similar structure, thus providing the end user with an apparatus that may easily be placed in one location on said deck or dock, then easily removed from that location and placed in a new location for securing objects to said deck or dock.

[0017] These together with other purposes of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific purposes attained by its users, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

[0018] In view of the disadvantages inherent in the known types of devices that are currently used to secure items to a deck or dock, it is the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new anchoring device that has many advantages of known securing devices, and many novel features that result in a new anchoring device which is not anticipated, rendered obvious, suggested or even implied by any of the prior art securing devices, either alone or in any combination thereof.

[0019] Therefore, in one aspect this invention comprises an anchoring device, comprising:

[0020] (a) a first loop made from a strip of material, wherein said first loop is in a first plane, and wherein an end portion of said loop has a first twist; and

[0021] (b) a pair of legs connected to said first loop via said first twist, wherein said pair of legs are in a second plane, and wherein said first plane and said second plane are different from each other.

[0022] In another aspect this invention comprises a method of making an anchoring device, comprising the steps of:

[0023] (a) forming a first loop from a strip of material by twisting said strip of material and forming a first twist and said first loop;

[0024] (b) forming a second loop by using extensions of material from said first twist to form said second loop and a second twist; and

[0025] (c) bending a portion of said strip of material after said second twist to form a leg portion and a leg extension portion, and thereby forming said anchoring device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] The features of the invention believed to be novel and the elements characteristic of the invention are set forth with particularity in the appended claims. The drawings are for illustration purposes only and are not drawn to scale. Furthermore, like numbers represent like features in the drawings. The invention itself, both as to organization and method of operation, may best be understood by reference to the detailed description which follows taken in conjunction with the accompanying drawings in which:

[0027] FIG. 1 is a side view of the deck tie which is used to illustrate one embodiment of the present invention.

[0028] FIG. 2 is an angular view of the embodiment of the invention as illustrated in FIG. 1.

[0029] FIG. 3 is a sectional view illustrating the invention of FIG. 1 in an opening between two structures.

[0030] FIG. 4 is an angular view of a second embodiment of the present invention.

[0031] FIG. 5 is a side view of a third embodiment of the present invention

[0032] FIGS. 6A through 6F illustrate additional embodiments of the present invention.

DETAILED DESCRIPTION

[0033] The present invention generally comprises a securing device that is preferably anchored to a deck or dock, which are normally of wooden construction, and are of various designs and configurations. The decks or docks are normally constructed in such a way so as to leave gaps or open spaces between the each plank or board. The present invention takes advantage of the gap or space between the boards, allowing the new anchoring device to be firmly secured into the gap or space between boards. To further explain the action necessary to secure the present invention to the deck or dock, the anchoring device is inserted between the opening between two boards, and rotated such that the anchoring device wedges and firmly secures itself between the two boards. Preferably, the new inventive anchoring device is turned one quarter turn to secure the new anchoring device to the deck or dock. To further appreciate the scope of the present invention, one should also know that to release the present invention from the deck or dock, one would simply need to rotate the new anchoring device another one-quarter turn thus releasing the new anchoring device from the deck or dock. To further appreciate the scope of the present invention, one should know that the design and configuration of the new anchoring device takes into consideration the important feature of not allowing the anchoring device to fall through the gaps or openings between the boards, having said this, the design of the present invention prohibits the new anchoring device from slipping through the gaps or openings.

[0034] There has thus been outlined, rather broadly, the more important features of the present invention in order that the detailed description thereof that follows may be better understood, and in that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

[0035] In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[0036] As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as the basis for designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

[0037] Further, the purpose of the foregoing is to enable the U.S. Patent and Trademark Office and the public generally, and especially the scientist, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. Additionally, the abstract of the invention is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting to the scope of the invention in any way.

[0038] With reference to the drawings, and in particular to FIGS. 1 and 2, a new anchoring device or deck tie employing the principals and concepts of the present invention and generally designated by the reference numeral 23 will be described, where FIG. 1 is a side view of the deck tie 23 which is used to illustrate one embodiment of the present invention, and where FIG. 2 is an angular view of the embodiment of the invention as illustrated in FIG. 1. The anchoring device 23 of the present invention is preferably made from a single strip 10, such as a wire 10, to form a first loop 18 having a first loop opening 20, a second loop 16 having a second loop opening 22, with legs 11 and 12. Furthermore, the anchoring device 23 has a first leg 11, a second leg 12 which terminate with a first leg extension 13 and second leg extension 14. The legs 11 and 12 are twisted to form a mid-twist area 15, and a leg separation area 24. The mid-twisted area 15, can be formed with as little as a half twist of the strip 10 or with more twists of the legs 11 and 12 as desired. The second loop 16 is then formed above the mid-twisted area 15 creating a second loop opening 22. The anchoring device 23 has a neck-twist area 17, which forms the first loop 18 having the first loop opening 20. The neck-twist area 17, can be formed with as little as a single half twist of the strip 10 or with more twists of the strip 10 as desired. The anchoring device 23 can have a smooth surface 21 or a roughened area 19.

[0039] With further reference now to the drawings, one will notice that the present invention comprises of a single wire configuration that encompasses the entire length of the new anchoring device, as such, those skilled in the art will appreciate the skill and elegance of obtaining such a design, however, this conception may readily be used as the basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention.

[0040] The strip 10 is preferably made from a wire, but other similar sturdy construction material can also be used to

make the deck tie 23. The diameter or cross-sectional dimensions of the strip 10, will depend upon the sturdiness of the material and the requirement of the application.

[0041] It is preferred that the first leg 11, second leg 12, and the second loop 16 are almost at a right angle or 90 degrees to the first loop 18, so as to prevent the new anchoring device 23 from slipping through any gaps or opening where this device 23 will be inserted. It should be appreciated that the mid-twisted area or portion 15 of the new anchoring device 21, is for the purpose of creating a strength point between the body portion or loop 16 and the leg portions 11 and 12.

[0042] It should be appreciated that the lower or bottom portion of the present invention comprises of two legs 11 and 12, and they are configured in such a shape so as to form a spring loaded effect when the legs 11 and 12, are pressed together thus keeping outward pressure in an area where the deck tie 23 is being used as an anchor.

[0043] FIG. 3 is a sectional view illustrating the invention of FIG. 1 in an opening or gap 29 between two structures 25, 27, such as, boards or planks 25, 27. As to a discussion of the manner of usage and operation of the present invention, the anchoring device 23, is preferably hand-held by the top portion or first loop 18, and the bottom portion or legs 11 and 12 are then placed inside the opening or gap 29 which are formed by the wall 26 of the board 25 and the wall 28 of the board 27. The anchoring device 23 is then turned in either a clockwise motion or a counter-clockwise motion, preferably about one-quarter turn, to allow the spring loaded legs 11 and 12 to grip the bottom edge of the boards 25 and 27, in such a way so that the anchoring device 23 becomes firmly secured between the boards 25 and 27. It is preferred that the leg extensions 13 and 14 expand and firmly rest against the bottom surface of the board 25 and 27, while the legs 11 and 12 expand and adhere to at least a portion of the walls 26 and 28.

[0044] It is preferred that at least a portion of the legs 11 and 12 also comprises a surface 19, this surface 19 comprises a design commensurate with gripping action, thus allowing the new anchoring device 23 to be held firmly between the boards 25, 27, and prevent any slipping action. It is preferred that a portion of the leg portion 11 and 12 of the new anchoring device 23 comprises of a knurled exterior 19, thus creating a better gripping action between the legs 11, 12 of the new anchoring device 23 and the inner walls 26 and 28 of the boards 25 and 27.

[0045] As illustrated in FIG. 3, the lower portion of the present invention 23 further comprises the two leg extensions 13, 14, so as to keep the new anchoring device 23 from pulling-up through the opening 29 between the boards 25 and 27, especially when under pressure.

[0046] As to still further discuss the manner of usage and operation of the present invention, it should be known that the leg portions 11 and 12 of the new anchoring device 23 may be spread or compressed, as required, prior to being inserted between the boards 25 and 27, thus allowing the anchoring device 23 to be firmly adhered to different and various widths of heretofore described gaps or openings 29 between the boards 25 and 27.

[0047] The anchoring device 23 can be inserted in any opening as long as the opening is between the lower portion of the second loop 16 and the upper portion of the leg extensions 13 and 14. However, for some applications the user may have to predetermine the thickness of the boards 25

and 27, and then make a judgment as to the depth of insertion required to allow the feet of the anchoring device 23 to be at an elevation level slightly lower than the thickness of the boards 25 and 27.

[0048] FIG. 4 is an angular view of a second embodiment of the present invention where the deck tie or anchoring device 43 has a first leg extension 33 which terminates with a first horn-shaped ending 35, and a second leg extension 34 which terminates with a second horn-shaped ending 36. A person skilled in the art would appreciate that the horn-shaped endings 35 and 36 could possibly penetrate the anchoring area and would also provide a sharp surface which could provide an additional resistance to the movement of the deck tie 43. These sharp horn-shaped endings 35 and 36 most probably could also act as mini-anchors so as to prevent any slippage of the legs 11 and 12 out of any gap or opening.

[0049] FIG. 5 is a side view of a third embodiment of the present invention where the deck tie or anchoring device 53 has a first leg extension 63 which terminates with a first horn-shaped ending 55, and a second leg extension 64 which terminates with a second horn-shaped ending 56. A person skilled in the art would appreciate that the horn-shaped endings 55 and 56 could possibly penetrate the anchoring area and would also provide a sharp surface which could provide an additional resistance to the movement of the deck tie 53. These sharp horn-shaped endings 55 and 56 most probably could also act as a mini-anchor so as to prevent any slippage of the legs 51 and 52 out of any gap or opening. The deck tie 53 could also have a first leg separator 57 between the leg 51 and the mid-twist area 15, and a second leg separator 58 between the leg 52 and the mid-twist area 15. The leg separator 57 and 58 create a leg separation area 54 so as to allow an area for spring-type action between the two legs 51 and 52. The leg extensions 63 and 64 could have a rounded configuration as illustrated in FIG. 5 or any other configuration as discussed elsewhere.

[0050] FIGS. 6A through 6F illustrate additional embodiments of the present invention, where the shape of the first loop 18 could be selected from a group comprising a triangular shape, a circular shape, an octagonal shape, a square shape, a rectangular shape, a crescent shape, a half-moon shape, an elliptical shape, a polygonal shape, an odd shape, to name a few. Similarly, the shape of the second loop 16 could be selected from a group comprising a triangular shape, a circular shape, an octagonal shape, a square shape, a rectangular shape, a crescent shape, a half-moon shape, an elliptical shape, a polygonal shape, an odd shape, to name a few. As illustrated in FIGS. 6A through 6F the legs 11 and 12 could have a variety of shapes, and similarly, the leg extensions 13 and 14 could also have a variety of shapes.

[0051] The present invention also provides a new anchoring device or deck tie which is susceptible of low cost of manufacturing with regard to both materials and labor, and which accordingly is susceptible of low prices of sale to the consuming public, thus making the new deck tie economically available to the buying public.

[0052] As discussed earlier the wire or strip for the deck tie can be made by twisting, bending, or configuring in such a manner that the inventive anchoring device when used in conjunction with a deck or dock and be used primarily to secure objects to the deck or dock.

[0053] The inventive anchoring device preferably made from a single wire comprising a top portion, a middle portion, and a bottom portion, collectively of unique design, construction, and configuration provides necessary instrumentation to accomplish the task of securing or anchoring objects to the deck or dock.

[0054] The deck or dock are normally of wooden construction and of various designs and configurations, and which are normally used in conjunction with or attached to a structure or home, or dock, normally wooden in construction and of various designs and configurations, normally used in conjunction to or with boating, marinas, swimming pools, and similar structural situations, and more particularly pertains to the new anchoring device for anchoring or securing anything to the deck or dock. However, it should be appreciated that the materials used for decks or dock could also be selected from a group comprising plastic material, nylon-type material, cement board material, tyvek material or any suitable composite-type material, to name a few.

[0055] The material for the deck tie is preferably selected from a group comprising of metal, aluminum, steel, hard-rubber, plastic, polymer based material, polyethylene material, composite material, multi-layered material, to name a few.

[0056] It is preferred that the material for the deck tie is selected from a group comprising of a corrosion resistant material, a flexible material, to name a few.

[0057] It is preferred that the cross-sectional shape of the strip of material used to make the deck tie is selected from a group comprising a triangular shape, a circular shape, an octagonal shape, a square shape, a rectangular shape, a crescent shape, a half-moon shape, an elliptical shape, a polygonal shape, an odd shape, to name a few.

[0058] Upon filing of the instant patent application the inventive deck tie will be available at www.dektie.com under the trademark DEKTIE™.

[0059] While the present invention has been particularly described in conjunction with a specific preferred embodiment, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art in light of the foregoing description. It is therefore contemplated that the appended claims will embrace any such alternatives, modifications and variations as falling within the true scope and spirit of the present invention.

What is claimed is:

1. An anchoring device, comprising:

- (a) a first loop made from a strip of material, wherein said first loop is in a first plane, and wherein an end portion of said loop has a first twist; and
- (b) a pair of legs connected to said first loop via said first twist, wherein said pair of legs are in a second plane, and wherein said first plane and said second plane are different from each other.

2. The anchoring device of claim 1, wherein a second loop is connected to said first loop via said first twist and said second loop is connected to said pair of legs via a second twist.

3. The anchoring device of claim 1, wherein each of said pair of legs have a leg extension, and wherein said leg extensions are at an angle to said leg.

4. The anchoring device of claim 3, wherein said leg extension terminates with a sharp pointed edge and wherein said sharp pointed edge is at an angle to said leg extension.

5. The anchoring device of claim 1, wherein the cross-sectional shape of the material for said first loop is selected from a group consisting of a triangular shape, a circular shape, an octagonal shape, a square shape, a rectangular shape, a crescent shape, a half-moon shape, an elliptical shape, a polygonal shape, and an odd shape.

6. The anchoring device of claim 1, wherein the shape for said first loop is selected from a group consisting of a triangular shape, a circular shape, an octagonal shape, a square shape, a rectangular shape, a crescent shape, a half-moon shape, an elliptical shape, a polygonal shape, and an odd shape.

7. The anchoring device of claim 2, wherein the shape for said second loop is selected from a group consisting of a triangular shape, a circular shape, an octagonal shape, a square shape, a rectangular shape, a crescent shape, a half-moon shape, an elliptical shape, a polygonal shape, and an odd shape.

8. The anchoring device of claim 1, wherein the material for said anchoring device is selected from a group consisting of metal, aluminum, steel, hard-rubber, plastic, polymer based material, polyethylene material, composite material, and multi-layered material.

9. The anchoring device of claim 1, wherein the material for said anchoring device is selected from a group consisting of corrosion resistant material and a flexible material.

10. The anchoring device of claim 1, wherein at least a portion of said anchoring device has a roughened surface.

11. The anchoring device of claim 1, wherein said strip is selected from group consisting of a wire and a ribbon.

12. The anchoring device of claim 1, wherein the cross-sectional shape of said strip is selected from a group consisting of a triangular shape, a circular shape, an octagonal shape, a square shape, a rectangular shape, a crescent shape, a half-moon shape, an elliptical shape, a polygonal shape, and an odd shape.

13. A method of making an anchoring device, comprising the steps of:

- (a) forming a first loop from a strip of material by twisting said strip of material and forming a first twist and said first loop;
- (b) forming a second loop by using extensions of material from said first twist to form said second loop and a second twist; and
- (c) bending a portion of said strip of material after said second twist to form a leg portion and a leg extension portion, and thereby forming said anchoring device.

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