March 26, 1963 A. J. NELSON 3,082,990

WATER SKI LINE HANGER

Filed Feb. 27, 1961

FIG. 1

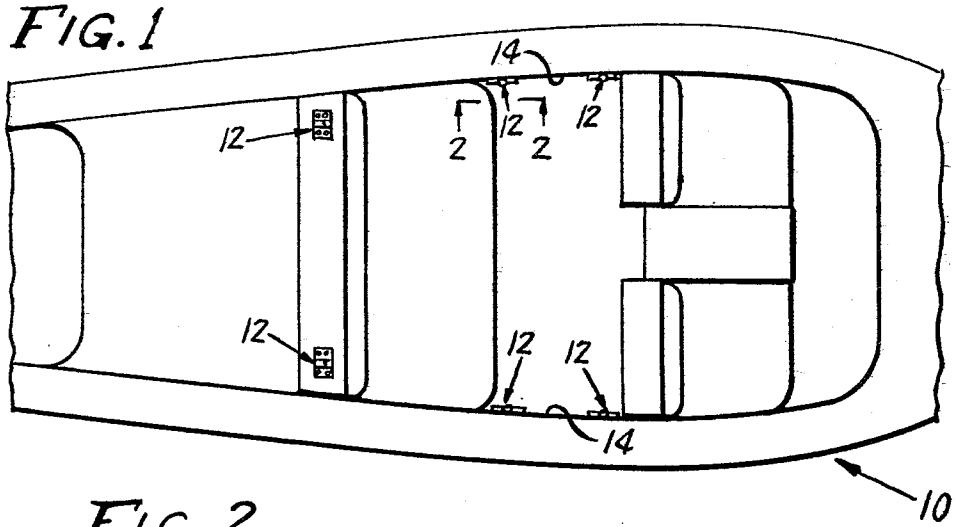
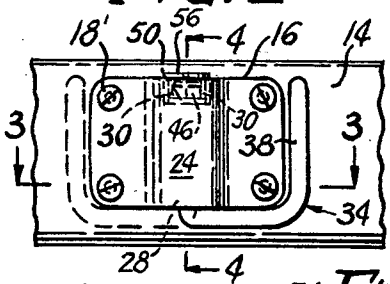



FIG. 2



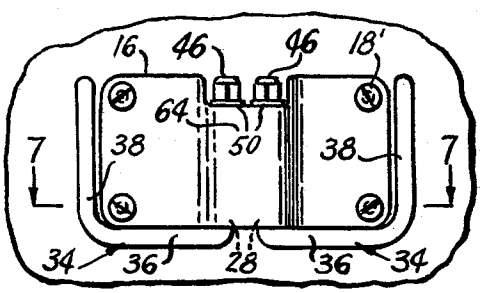
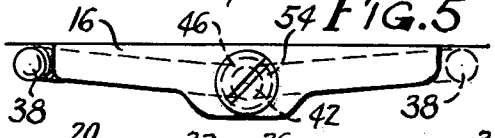




FIG. 6

FIG. 5



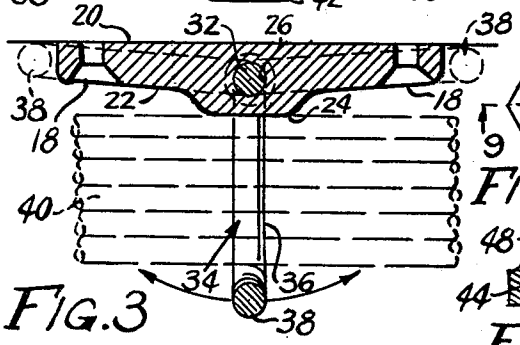




FIG. 3

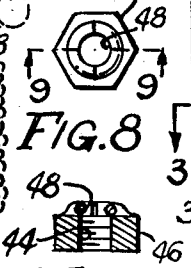



FIG. 8

FIG. 9

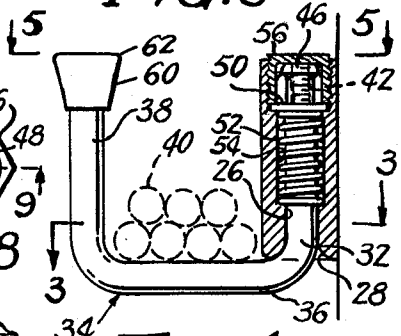



FIG. 4

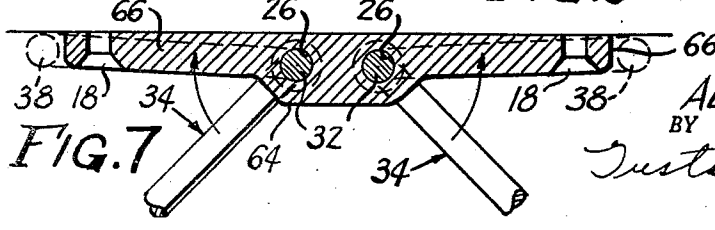



FIG. 7

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# WATER SKI LINE HANGER

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8 Claims. (Cl. 248—308)

This invention relates to a water ski rope hanger, particularly intended for use on boats that are used for towing water skiers, so that the ski tow rope may be stored in a convenient and safe position on the boat instead of being loosely coiled on the bottom where it gets tangled and is dangerous to the occupants of the boat; and furthermore, when used, is often dangerous to the skier as the boat tends to drift away while the rope is being uncoiled and unknotted.

Still a further object of this invention is to provide a water ski rope hanger which, when not in use, is folded safely to one side so that it is of no danger to anyone walking close thereby and which, when in use, is extended to make it readily usable, and which further is yieldable to move readily between folded and extended position, yet will stay in any set position without rattling or turning of itself.

Still a further object of this invention is to provide a hanger which, while most useful as a water ski rope hanger, is also usable as a hanger in general, particularly on boats or other vehicles where space is at a premium, and which may be used on boats in appropriately spaced pairs for supporting other slender objects such as fishing poles or the like, and which is equally useful anyhere a hook or hanger is needed, particularly where it is desirable that the hook be completely out of the way when not used, yet is extendible easily and conveniently for use. If, when extended, it is accidentally contacted by a person, it will yieldably move out of the way and greatly diminish the possibility of injury through contact therewith.

To further diminish the possbility of injury through personal contact therewith, it is an object of this invention to provide a cushioning means on the support hook end of the hanger which will not only cushion or diminish the shock of contact therewith by a person, but which also will serve to assist in retaining the rope or fishing pole supported on the hanger, diminishing its liability of slipping over such hook end.

Still a further object of this invention is to provide a hanger which may be made with a single hook means on a single supporting base or, alternatively, may be provided with two individual spaced-apart hook means on the same supporting base, each of which is capable of receiving a separate coil of rope thereon, and each of which, when not in use, may be folded to one side so that the folded away support hook streamlines with the thickness of the support base, and thus occupies a minimum space, the base having a flat vertical surface so that it may be secured against a vertical wall in the boat or vehicle, occupying a minimum amount of space thereon.

Still a further object of this invention is to provide a water ski rope hanger having a base which can be readily secured on a vertical wall or side of a boat, bearing in mind that many pleasure boats of this type are now made of plastic glass rather than of wood, as in the past, and hence, the walls are fairly thin and cannot therefore support an ordinary hook such as a conventional clothes hook, because the supporting means for such a hook would place too great a strain on too small an area of the side of the boat. With this invention, the base for the hook spreads the support pressure over a substantial area of the side of the boat so that it does not provide any too great pressure thereon, yet



can carry its entire load easily without causing damage to the side of the boat.

With the above and related objects in view, this invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawing in which:

FIG. 1 is a top plan view of a typical pleasure boat, showing typical locations for the water ski rope hanger of this invention.

FIG. 2 is an elevational view of one form of the rope hanger, on line 2—2 of FIG. 1.

FIG. 3 is a sectional view on line 3—3 of FIG. 2, and likewise, on line 3—3 of FIG. 4.

FIG. 4 is a sectional view on line 4—4 of FIG. 2.

FIG. 5 is a top plan view on line 5—5 of FIG. 4.

FIG. 6 is a front elevational view of a modified form of this invention, showing two hanger hooks supported on a single base.

FIG. 7 is a sectional view on line 7—7 of FIG. 6.

FIG. 8 is an elevational view of an elastic stop nut as used in securing the hook in position.

FIG. 9 is a sectional view on line 9—9 of FIG. 8.

There is shown at 10 a typical boat, often made of plastic glass, with one form of the water ski hanger of this invention, 12, shown in several typical locations thereon, such as supported on opposite side walls 14 of the boat 10, or elsewhere wherever desired. The particular location of the hanger 12 on the boat is, of course, at the option of the boat owner, and it may be used where desired either singly or in appropriately located pairs.

In the form of invention shown in FIGS. 2 to 5, there is shown a base 16 substantially rectangular in outline, as shown, provided with four appropriately located countersunk bolt or screw receiving apertures 18, preferably one in each of the four corners, through which suitable bolts or set screws 18' are passed and secured in or through the side wall of any vehicle or boat or other appropriate surface of a vehicle or boat or area where it is to be used. This base may be made of any suitable or appropriate material such as metal, including steel, aluminum, or other suitable metal preferably initially non-corrosive or coated completely with non-corrosive coating, or may be made of suitable plastic, particularly high-impact plastics, and when intended for use in cooperation with a plastic boat, the base may be made of a plastic that may itself be bonded by a suitable plastic cement to the side wall of the boat. In this case, the countersunk apertures 18 may be ignored or omitted.

The rear vertical wall 20 of the base 16 is flat, as shown, so that it may be placed flat against the side wall 14 of the boat or supporting surface. Extending forwardly from about the center of the front wall 22 of base plate 16 is a boss 24 of sufficient thickness so that a vertical counterbore aperture 26 is provided therein. This counterbore 26 is provided with a beveled countersink 28 at the bottom thereof, which is present in both forms of the invention, and in the form of the invention disclosed in FIGS. 1 to 4 inclusive, it is provided with a second countersink 30 at the top thereof.

Extending through this counterbore 26 is the pivot leg 32 of a hanger hook 34, the pivot leg 32 being connected by its bight 36 connecting it to the other leg, providing a rope retaining leg 38 of the U-shaped hook 34. Obviously, the bight 36 acts as a support for the coils 40 of a ski rope that may be coiled thereon, as well as for any other slender object that may be supported therein, as desired.

The upper end of the pivot leg 32 is threaded as at 42 so as to cooperate with the threads 44 of an elastic stop

nut 46, hexagonal in shape, and provided with a built-in fabric washer 48 which, when the nut is placed on the threads, is compressed thereby and holds the nut 46 against turning relative to the threads 42 on the pivot leg 32, so that when the leg 32 is pivoted, the nut pivots therewith. A washer 50 is provided between the bottom of the nut 56 and the bottom of the countersink 30 into which the nut is threaded. Beneath the washer 50 there is provided a coil spring 52 located within the large bore 54 of the counterbore 26, coil spring 52 cooperating with the washer 50 and nut 46 holds the pivot leg firmly yet yieldably in position within the counterbore, the bend between the pivot leg 32 and the bight 36 of hook 34 being complementary to the countersink 28 so that the hanger hook 34 may rotate yieldably, yet not rattle therein. The countersink 30 and the counterbore 26 in effect provide a two-step counterbore in which there is a large top bore portion 30, an intermediate bore portion 54 and a small bottom bore portion.

In the form shown in FIGS. 1 to 4, the countersink 30 is threaded so as to cooperate with the external threads of a cap nut 56 threaded therein after the nut has been put in place, to completely close the countersink and thus make it impossible for moisture to enter the same and interfere with its operation in any manner.

As shown in FIG. 3 and FIG. 4, the hanger hook 34 is extended forwardly when providing its supporting function for the rope coil 40, but when not in use, as shown in FIG. 2 and in dotted outline in FIG. 3, the rope retaining leg 38 is pivoted about so as to be in streamline cooperation with one vertical end of the rectangular base 16, lying closely adjacent thereto and completely out of the way, the boss 24 likewise streamlining to its side as shown.

To diminish the possibility of personal injury, as well as to assist in holding the rope coil 40 in place, there is provided an inverted button 60 of cushion material, such as rubber, or other yieldable flexible plastic, shaped preferably as shown, with a thickened base edge 62 and holding itself resiliently on the hook end of leg 38.

The form of invention shown in FIGS. 6 and 7 differs from that in FIGS. 1 to 4 by having two hooks 34, by having the boss 64 of sufficiently greater width so that two counterbores 26 may be located therein instead of one, and the base plate 66 is of sufficiently greater length so that each hook 34, when in folded position, likewise lies closely adjacent the end vertical edge 66 as shown in FIG. 7.

In the form first disclosed in FIGS. 1 to 4, the hook 34 will obviously be opened to a 90° position therefrom for supporting the rope coil 40, but in this form, with two hooks 34, the hooks 34 will be open to a position of about 45° to 60° so that each may support a separate coil of rope 40 thereon. Otherwise, the construction and operation is substantially the same, except for the fact, as here shown, instead of providing a countersink and a cap nut at the top of the pivot end above the counterbore, the base may be completely cut away, making both nuts 46 completely visible.

However, if the boss 64 is of sufficient size, obviously identical countersinks using cap nuts may be provided in this form as in the other. Similarly, the countersink could be omitted in the first form, and the space for receiving the nut 46 may be likewise completely cut away. Other than this, the construction and operation of both forms are substantially identical.

In operation, when used for its particularly intended use as a ski rope hanger, these hangers 12 are located in any suitable location, and the hooks 34 are extended away from the base to receive the coil, and when not in use, they are folded closely adjacent the end vertical edge so as to be completely out of the way, and thus streamline with the base, which is also streamlined into the boss, and thus, are so thin that they do not present much liability of personal injury through contact therewith.

Furthermore, should such contact take place, the cushioning inverted button 60 thereon necessarily diminishes the liability of injury, the cushioning button 60 also serving to prevent the coils 40 from accidently slipping over it, particularly when the coils almost completely fill the space between the hook leg 38 and the base plate 16.

Although described particularly for use in boats, it may be used anywhere else where space is at a premium and where it is desirable that a hook be readily available for use when desired, and yet completely out of the way when its use is not desired. Due to the presence of the coil spring 52 in the counterbore 26, there will be no rattling between the hanger hook 34 and the base plate 16, even though the vehicle or boat in which it may be supported may be traveling, and thus be subject to vibration.

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. A hanger comprising a substantially rectangular plate arranged to be secured to a vertical surface, U-shaped hook means having one leg pivotally and yieldably secured vertically through said base plate from the bottom thereof and having its other leg providing a retaining leg connected to said pivotally secured leg by a supporting bight of a length to closely underlie the bottom of said base plate with said retaining leg movable to a position closely adjacent a vertical end of said base plate, the minimum thickness of said plate being not less than the thickness of said hook means.

2. The hanger of claim 1, said pivotal leg extending into a nut-receiving countersink in the upper surface of said base plate, a nut in said countersink threaded on the upper end of said pivotal leg, and means closing said countersink against access of moisture thereto.

3. The hanger of claim 1, said hook means comprising two U-shaped hooks having laterally spaced apart pivotal legs extending vertically through an integrally projecting streamlined front boss on said base plate, one retaining leg being movable between a forward position to a position closely adjacent one vertical end of said base plate, the other retaining leg being movable between a forward position and a position closely adjacent the other vertical end of said base plate.

4. The hanger of claim 1, and cushioning means on the upper end of said hook means support leg.

5. A hanger comprising a substantially rectangular base plate having a flat vertical back, a U-shaped hook, the minimum thickness of said plate being not less than the thickness of said hook, said plate having a vertical two-step counterbore therethrough, with the small bore portion at the bottom thereof, the end of one leg of said U-shaped hook being screw-threaded, said screw threaded leg extending upwardly through said two-step counterbore, a coil spring located in the intermediate bore portion about said hook leg therethrough, a washer in the top bore portion about said leg above said coil spring, an elastic stop nut threaded on said screw threaded leg end and countersunk into said plate above said counterbore therethrough, said nut, washer and coil spring rotatably securing said hook leg in said counterbore, the bottom of said plate having a radius countersink to said bore corresponding to a radius of curvature between said threaded hook leg and its supporting bight, the other leg of said U-hook providing a retaining leg, the length of said hook bight to said retaining leg corresponding to the length of said plate between said counterbore and a vertical end, whereby said retaining leg and said retaining

bight may fold into the same plane with said plate and said retaining leg may lie closely adjacent said vertical end with said bight adjacent said bottom, or be rotated outwardly therefrom into support position, said coil spring yieldably retaining said retaining leg bight in any set position.

6. The hanger of claim 5, and a cap screw-threaded into the countersing above said counterbore and above said nut therein to close said countersink and counterbore against access of moisture thereto.

7. The hanger of claim 5, and a cushioning inverted cup bottom on the free end of said retaining leg.

8. The hanger of claim 5, said plate having a forwardly extending streamlined boss in which said vertical counterbore is located.



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