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[54] **WATER SKI STOWING DEVICE**

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[51] **Int. Cl.** **B60r 9/08**

[58] **Field of Search**..... 224/42.1 F, 42.45 R; 211/60 SK

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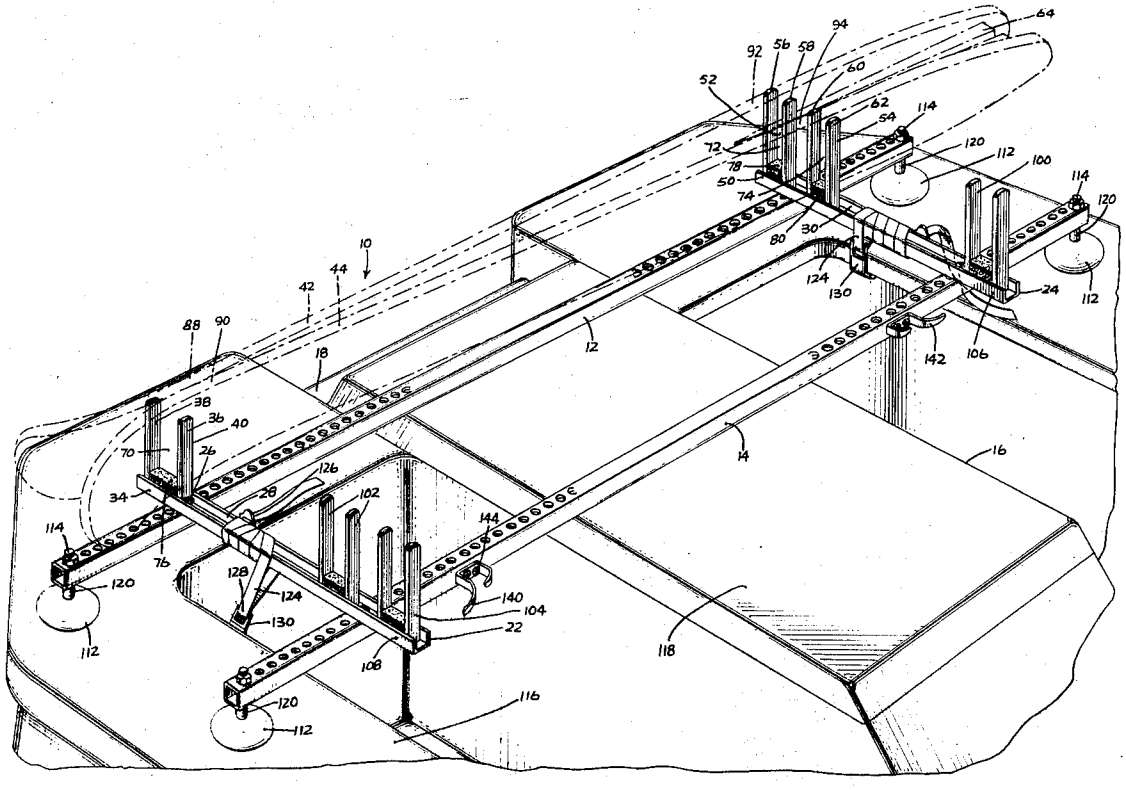
[57] **ABSTRACT**

A device for stowing water skis on a boat comprising at least one elongated member and means for securing the member to the deck of a boat. A plurality of bifurcate elements are mounted adjacent the opposite ends of the elongated member, the bifurcate elements being adapted to slidably receive and frictionally engage a pair of water skis edgewise therein. The bifurcate elements are arranged to provide necessary clearances for protruding parts of the water skis.

14 Claims, 4 Drawing Figures



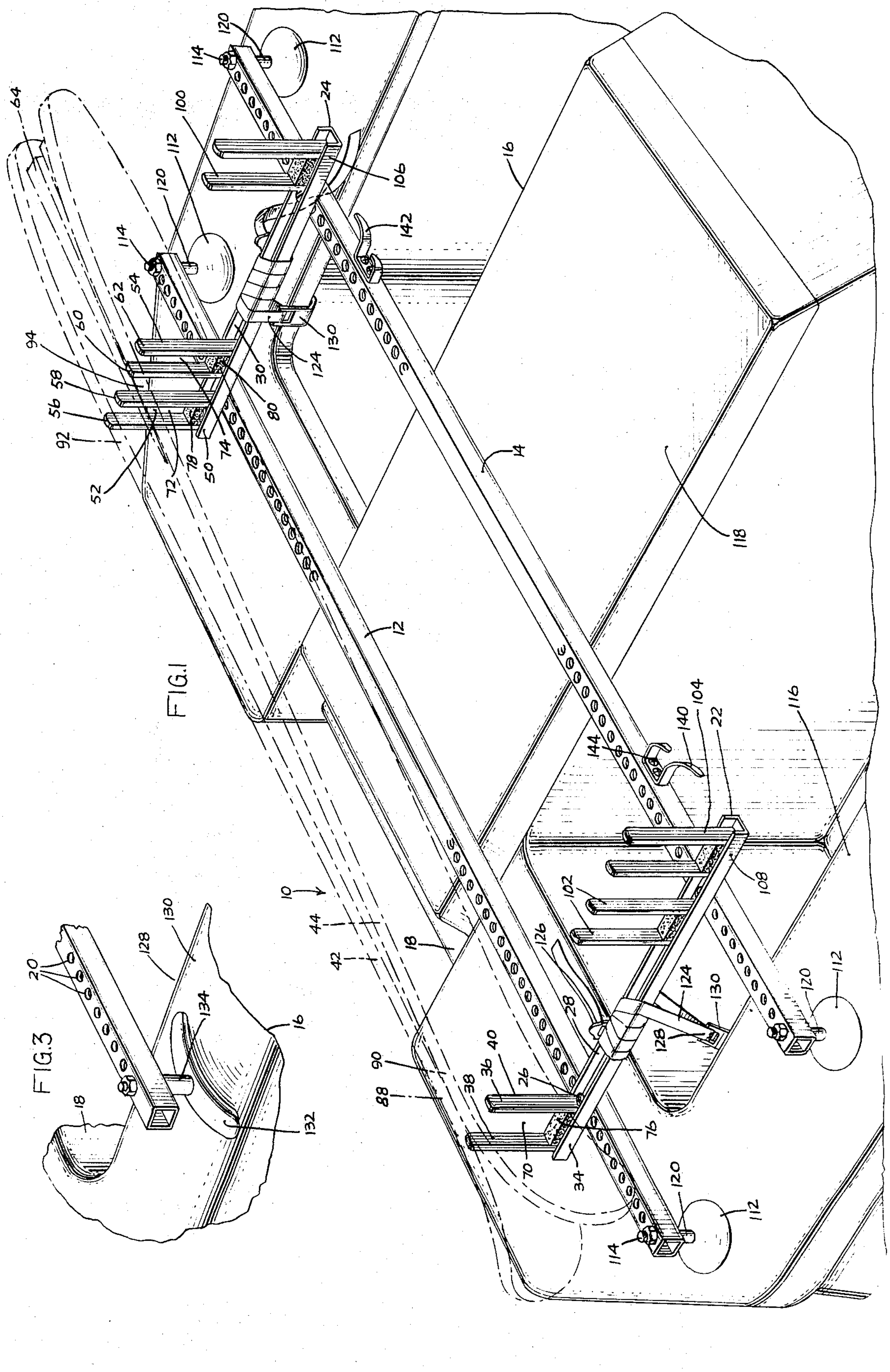


FIG. 1

FIG. 3

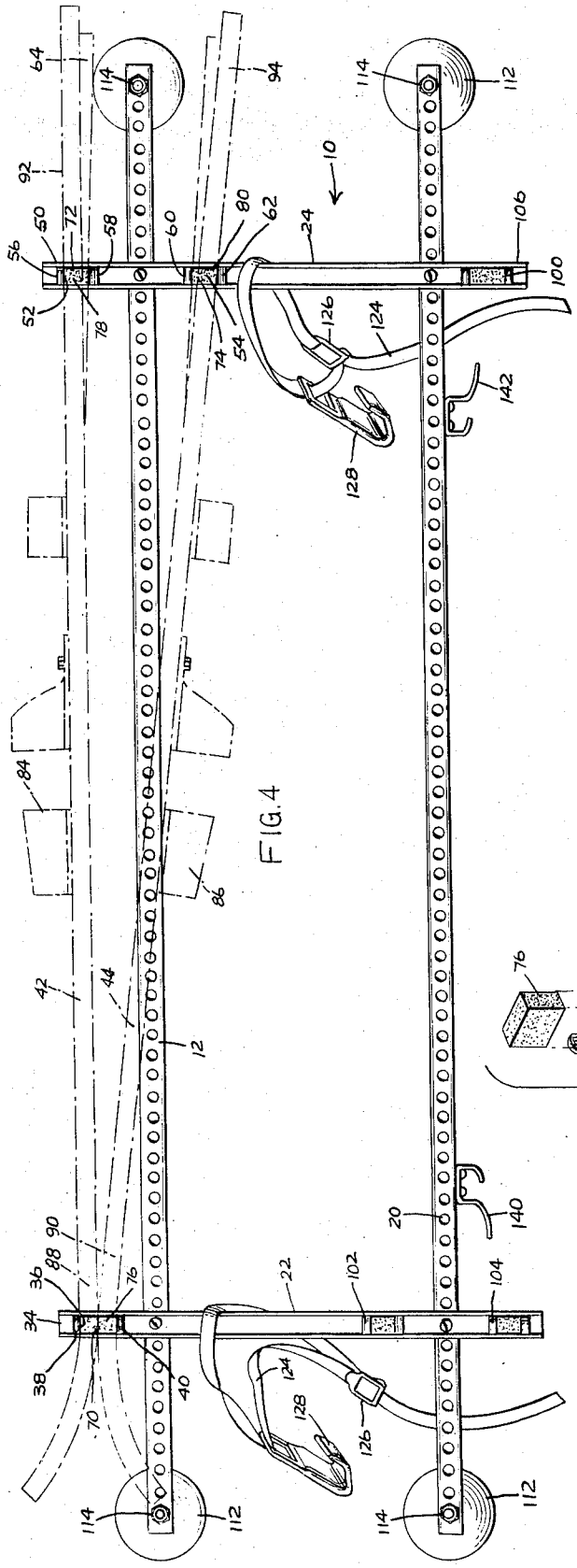


FIG. 4

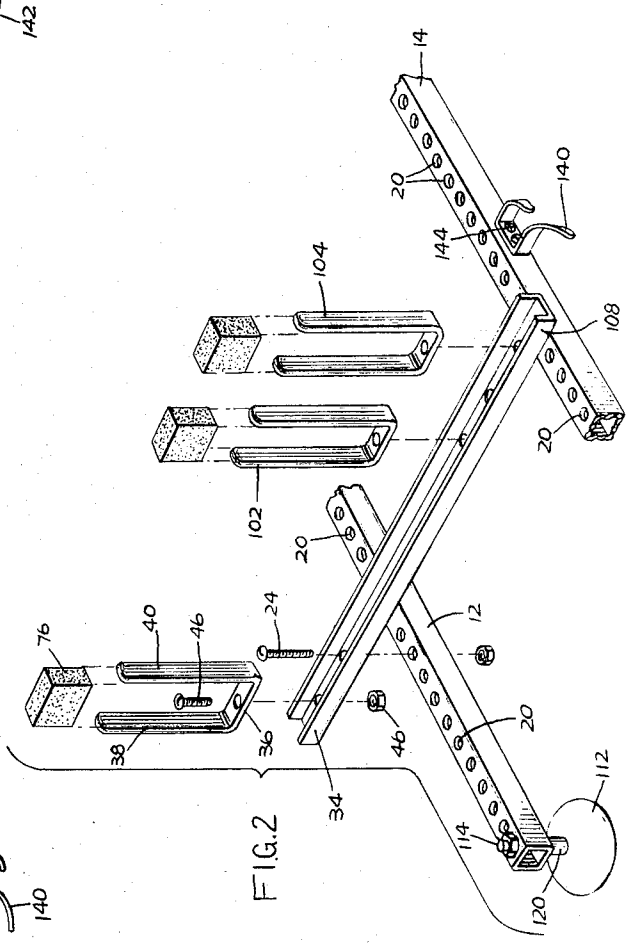


FIG. 2

WATER SKI STOWING DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a water ski stowing device and more particularly to such a device which includes a plurality of bifurcate elements adapted to receive a pair of water skis edgewise therein and frictionally retain same against movement.

2. Description of the Prior Art

The popularity of the sport of water skiing is well established. It is also well known that the sport has many variations ranging from straight tow skiing, jumping, slalom skiing and single ski skiing. Each of these variations of the sport, as well as personal preferences of the skiers has led to the development of numerous ski designs with each design being adapted for use in one or more of the variations of the basic sport. For this reason it is frequently desirable to carry or stow more than one type of water ski aboard a boat.

It is also common practice to tow more than one water skiier behind a boat at one time. For this reason it is frequently desirable to carry more than one pair of water skis aboard a boat.

It is further well known that the majority of water craft that are used for towing water skiers function as general purpose boats. That is, the boats are used for other functions such as boating itself, fishing, and utility purposes as well as for towing water skiers. Consequently, when the boat is not being used for water skiing, the water skis must either be taken from the boat and stored ashore or stowed aboard the boat. Since most general purpose craft do not include facilities for storing and securing, i.e., stowing, relatively large and bulky articles such as water skis, the water skis are frequently stashed in a rather haphazard manner aboard the boat. Such a manner of stowing the skis is, if not dangerous, inconvenient.

Lastly, the increasing popularity of boating as a recreational activity has led to the development of a variety of types of pleasure craft, the most popular of these being the outboard and inboard-outboard type boats. These two basic types of boats take on many variations in the shape and size due to the number of manufacturers producing such boats and the different tastes of the buyers. For this reason, accessories which can be universally mounted to most if not all boats are frequently not available.

SUMMARY OF THE INVENTION

Broadly, the present invention is a device for stowing water skis on a boat thereby to overcome the aforementioned problems and comprises a generally elongated member and means for securing the member to the deck of a boat. A plurality of bifurcate elements, each having a pair of parallel fingers, are secured adjacent the opposite ends of the elongated member, respectively. The fingers of the bifurcate elements are spaced apart by a dimension whereby one or more water skis may be slidably received edgewise and frictionally retained therein. The arrangement of the bifurcate elements is such that necessary clearances for the fins or other protruding portions of the water skis are provided.

In a specific embodiment of the invention, a first bifurcate element includes a pair of parallel fingers which are laterally spaced apart by a dimension essentially equal to the thickness of two water skis, this element being secured to one end of the elongated member. A second and a third bifurcate element are secured to the elongated member adjacent the opposite end thereof, the second and third bifurcate elements each having a pair of parallel fingers which are laterally spaced apart by a dimension equal to the thickness of a single water ski. The second and third bifurcate elements are further laterally spaced apart from each other by a dimension equal to or greater than the depth of the fin of the water ski. Two water skis, typically a matched pair, are placed bottom to bottom and inserted edgewise into the first bifurcated element. The heel ends of the skis are individually received in the second and third bifurcated elements.

Further, in a specific embodiment of the invention, the means for securing the elongated member to the boat includes a plurality of suction cups longitudinally adjustably secured adjacent the opposite ends of the elongated member whereby the suction cups may be positioned to engage the upwardly disposed surfaces of the gunwales of boats having different beams. The securing means may also include at least one adjustable strap secured to one end of the elongated member and fitted at its distal end with a hook element which is adapted to engage the underside of the gunwale of the boat.

It is therefore an object of the invention to provide a device for stowing one or a plurality of water skis aboard a boat.

It is another object of the invention to provide such a device which utilizes bifurcate elements to slidably receive and frictionally engage one or more water skis edgewise therein.

It is still another object of the invention to provide such a device which is adjustable to fit a wide variety of boats.

It is yet another object of the invention to provide a stowing device which can be simply and easily removed from the boat and used as a storage rack for the water skis when not in use.

Another object of the invention is to provide such a device which stows the water skis such that they do not interfere with normal use of the boat.

It is still another object of the invention to provide such a device which includes means for stowing a water ski tow rope thereon.

BRIEF DESCRIPTION OF THE DRAWINGS

The above-mentioned and other features and objects of this invention and the manner of attaining them will become more apparent and the invention itself will be best understood by reference to the following description of an embodiment of the invention taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a perspective view of the ski stowing device of the present invention shown installed on the rear portion of a boat;

FIG. 2 is a fragmentary, exploded view of the stowing device showing details of the ski retaining brackets;

FIG. 3 is a fragmentary, perspective view showing a modification of the invention; and

FIG. 4 is a top-plan view of the ski stowing device showing the relationship of a pair of water skis when stowed in the rack.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawing there is shown a ski stowing device indicated generally at **10** which comprises first and second elongated frame members **12** and **14**. Members **12** and **14** are dimensioned to span the beam of a boat **16** adjacent the transom **18** thereof. Each of members **12** and **14** is hollow, of rectangular cross-section, and, as shown in FIGS. **2, 3,** and **4,** are preferably provided with a multiplicity of uniformly spaced-apart vertically extending holes as at **20.**

A pair of rigid connecting links **22, 24** are pivotably connected between members **12, 14** adjacent the opposite ends thereof by means of suitable threaded fasteners as at **26.** Links **22, 24** have a channel-shaped cross-section whereby they have as recesses **28, 30** extending the length thereof which are disposed upwardly with respect to members **12, 14.**

Adjacent end **34** of link **22** is a first bifurcate element **36.** Element **36** may be made of resilient, flat steel and formed into a U-shape by bending whereby it has two parallel, spaced-apart fingers **38, 40.** The spacing between fingers **38, 40** is equal to about the thickness of two water skis **42, 44** (shown in phantom) and a length about that of the width of a water ski whereby water skis **42, 44** will be firmly engaged thereby and secured within recess **28** by means of a threaded fastener **46** (FIG. **2** only).

Secured to end **50** of link **24** and upstanding therefrom are second and third bifurcate elements **52, 54** also made from resilient steel and which have parallel spaced-apart fingers **56, 58** and **60, 62,** respectively, also having lengths equal to about the width of a water ski. The spacing between fingers **56, 58** and between fingers **60, 62** is about the thickness of a single water ski, such that a single water ski will be firmly engaged thereby. Bifurcate elements **52, 54** are further spaced-apart laterally with respect to member **12.** For a reason to be explained below, this space is equal to or greater than the depth or height of the fins **64** of water skis **42, 44.**

It will be observed that the parallel fingers **38, 40, 56, 58,** and **60, 62** of bifurcate elements **36, 52,** and **54** define therebetween slots **70, 72,** and **74,** respectively. In the bottom of the slots **70, 72** and **74** are secured suitable cushions **76, 78,** and **80,** respectively. These cushions are made of soft, resilient material such as sponge rubber and are held in position by means of a suitable mastic or adhesive. Preferably, each of the fingers **38, 40,** and **56** through **62** has a covering of relatively soft, pliable material such as rubber or plastic. Such a cover may be applied, for example, by dipping the bifurcate elements in a suitable liquid plastic or rubber, many such materials being known in the art. This cover not only eliminates marring the finish of water skis **42, 44,** but also increases the ability of elements **36, 52,** and **54** to frictionally retain the skis **42, 44** therein.

It will now be observed that the heel portions **92, 94** of water skis **42, 44** respectively may be individually received edgewise in respective ones of slots **72, 74** as shown. Similarly, the toe ends **88, 90** of skis **42, 44** are placed bottom to bottom and positioned together between finger elements **38, 40** of bifurcate element **36.** By reason of the lateral spacing of the bifurcate elements **52, 54,** proper clearance for the fins or keels **64** of the skis **42, 44** is provided. The bottom to bottom relationship of the skis **42, 44** obviates any interference between the curved toe ends **88, 90** and foot receptacles **84, 86** (FIG. **4** only).

A second set of bifurcate elements **100, 102,** and **104** are secured to ends **106** and **108** of links **24, 22,** respectively. It will be observed that bifurcate elements **100, 102** and **104** are identical to bifurcate elements **36, 52,** and **54,** respectively, but are oppositely disposed with respect to members **12** and **14.** That is, double thickness bifurcate element **100** is laterally adjacent single thickness bifurcate elements **52, 54** and single thickness bifurcate elements **102, 104** are laterally adjacent double thickness bifurcate element **36.** In all other respects, the two sets of bifurcate elements are identical whereby it will be apparent that a second pair of water skis (not shown) may be vertically slidably received in the second set of bifurcate elements.

To provide a means for securing the stowing device **10** to the boat **16,** there are provided a plurality of suction cups **112** which are secured adjacent the ends of members **12** and **14** by means of suitable threaded fasteners **114.** To provide a means for adjusting the vertical spacing between the stowing device **10** and the deck **116** of boat **16,** and thereby to provide necessary clearances between the stowing device **10** and portions of the boat **16** such as the motor housing **118** which may extend upwardly above the surface of deck **116,** there are provided suitable tubular standoffs or spacers **120** which are received about threaded fasteners **114** and between suction cups **112** and members **12** and **14** as shown. It will further be apparent that the stowing device **10** may be selectively moved forwardly or rearwardly to any convenient position on deck **116.**

To further provide for securing the stowing device **10** to boat **16,** stowing device **10** may further be provided with one or more adjustable straps **124.** Straps **124** are provided with a suitable length-adjusting buckle as at **126** and are fitted at their distal ends **128** with a hook element **130.** Hook **130** is adapted to engage the undersurface of the gunwale of boat **16,** and, when tightened, positively secures the stowing device **10** against separation from the deck **116** of boat **16.**

Referring now specifically to FIG. **3,** there is shown a modification of the stowing device **10.** As is well known, many models of general purpose water craft do not have a flat or generally flat deck surface **116** adjacent the transom **18** thereof. Rather, many such boats are provided with what are commonly referred to as fenders or fins **128,** the structures generally having a curved upper surface as at **130.** Therefore, to adapt the stowing device **10** for mounting on this type of boat structure, the suction cups **112** of the embodiment of FIGS. **1, 2,** and **4,** are replaced with arcuate brackets **132.** As with suction cups **112,** suitable spacers or standoffs **134** are provided for adjusting the vertical spacing of the stowing device **10** above the surface of the boat **16.** Brackets **132** are preferably coated with a suitable pliable material such as plastic or rubber and may further be bendable or deformable whereby they can be adjusted to conform closely to the surface **130.**

In each of the embodiments, the lateral spacing of the suction cups **112,** or in the alternative, brackets **132,** may be adjusted by repositioning the same in different ones of the holes **20** in members **12, 14,** thereby adapting the stowing device **10** for use on boats having different beams.

As best seen in FIGS. **1** and **4**, member **14** is further provided with a pair of winding hooks, **140, 142,** which are longitudinally spaced apart with respect to member **14** and secured thereto with suitable threaded fasteners as at **144.** Hook elements **140, 142** provide a convenient means for wrapping the water ski tow rope on to the stowing device **10** thereby providing for the neat and convenient storage thereof. While only one pair of hook elements **142, 144,** is shown, it will be apparent that a second pair of hook elements may be fitted to member **12** thereby providing for the stowing of a second water ski tow rope.

In the embodiment illustrated in FIGS. **1** and **4,** the stowing device **10** has been shown with two sets of bifurcate elements. It will, however, be apparent that the stowing device could be made with as few as one set of bifurcate elements, or, in the alternative, may be fitted with a plurality of sets of such elements depending upon the needs of the user and limited only by the available space adjacent the transom of the boat **16.**

The bifurcate elements themselves are seen to snugly frictionally engage water skis placed therein. The skis are stowed such that a minimum of space is required. The means for securing the stowing device **10** to the boat is readily adjustable both vertically and laterally and, by reason of the modification thereto, i.e., brackets **132,** the stowing device is adaptable for use on most if not all general purpose type boats.

It will further be apparent that the stowing device **10** can be removed from the boat with water skis still in position therein. In this event, the stowing device **10** provides a convenient and easily manageable carrying device for transporting the skis and also provides a means for safely and securely stowing the skis on land when they are not in use.

When the skis are removed from the stowing device **10,** the stowing device itself can be removed from the boat and folded such that members **12** and **14** are contiguous thereby reducing the amount of space required for storing the stowing device **10** itself and facilitating handling thereof.

The stowing device **10** is light in weight, does not detract from the appearance of the boat, and is rugged and relatively simple in structure.

In a working model of the invention, the following dimensions were used:

Members **12, 14,** 1 inch square by 60 inches long;

Holes **20,** 5/16 inch diameter, 1 inch center to center;

Slot **70,** 1 ¾ inches wide, 4 inches deep;

Slots **72, 74,** 1 ¼ inches wide, 4 inches deep;

Fingers **38, 40, 56, 58, 60, 62,** three fourths inches wide, one eighth inch thick;

Links **22, 24,** 12 inches long, 1 inch wide, one half inch thick.

While there have been described above the principles of this invention in connection with specific apparatus, it is to be clearly understood that this description is made only by way of example and not as a limitation to the scope of the invention.

What is claimed is:

1. A device for stowing at least one pair of water skis having front portions and fins on the rear portion thereof on a boat comprising an elongated supporting frame, means for securing said frame to the deck of a boat, a first bifurcate element coupled to said frame adjacent one end thereof and having parallel fingers defining therebetween a slot having a width dimensioned frictionally and slidably to receive therebetween a pair of water skis disposed in abutting bottom to bottom relationship, second and third bifurcate elements coupled to said frame adjacent the other end thereof in spaced-apart relationship laterally with respect to said frame, said second and third bifurcate elements each having parallel fingers defining therebetween second and third slots, respectively, each dimensioned frictionally and slidably to receive therebetween a single water ski, said first, second, and third slots being generally parallel to the longitudinal extent of said frame and thereby being the sole means for holding such skis on said frame, the lateral spacing between said second and third bifurcate elements being equal to or greater than the depth of the fins of a pair of water skis when the front portions thereof are received between the fingers of said first bifurcate element and the rear portions thereof, respectively, are received between the fingers of said second and third bifurcate elements.

2. The device of claim **1** wherein said fingers of said first, second, and third bifurcate elements are resiliently bendable.

3. The device of claim **1** further comprising a cushion secured adjacent the bottom of each of said first, second, and third slots.

4. The device of claim **1** wherein said fingers of said first, second, and third bifurcate elements include a covering of pliable friction increasing material.

5. The device of claim **1** wherein there are two of said elongated members on said frame and further including a pair of connecting links pivotally connecting together said elongated members adjacent the opposite ends thereof, respectively, said members being movable between a folded position contiguous to each other and an extended position in which said members are disposed in laterally, spaced-apart relationship, there being a first, second, and third bifurcate element associated with each said elongated member, said first bifurcate elements being secured to mutually opposite ends of said elongated members.

6. The device of claim **5** further comprising means mounted on an outwardly disposed surface of one of said elongated members for winding a water ski tow rope thereon.

7. The device of claim **6** wherein said winding means includes a pair of longitudinally, spaced-apart hooks secured adjacent opposite ends of said one member and extending outwardly therefrom.

8. The device of claim **7** wherein said first, second, and third bifurcate elements are mounted on said links.

9. The device of claim **1** wherein said securing means includes a pair of suction cups secured to said elongated frame adjacent the opposite ends thereof, respectively, in selectable, laterally spaced-apart relationship.

10. The device of claim **9** wherein said securing means further includes at least one flexible strap having one end thereof coupled to said elongated frame member, a hook element secured to the distal end of said strap, said hook element being adapted to engage a portion of said boat, and means for adjusting the length of said strap.

11. The device of claim **1** wherein said securing means further includes means for supporting said elongated frame member at a selected height above the deck of said boat.

12. The device of claim **1** wherein said securing means includes a plurality of generally arcuate brackets

fixedly secured to said elongated frame member adjacent the opposite ends thereof, respectively, the opposite ends of said brackets curving downwardly with respect to said elongated frame members.

13. The device of claim 12 wherein said brackets include a covering of pliable friction-increasing material.

14. The device of claim 1 wherein said fingers of said first, second, and third bifurcate elements have a length essentially equal to the width of a water ski.

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