June 20, 1967 H. C. BAKER 3,326,175

WATER SKIING AID

Filed Oct. 15, 1965

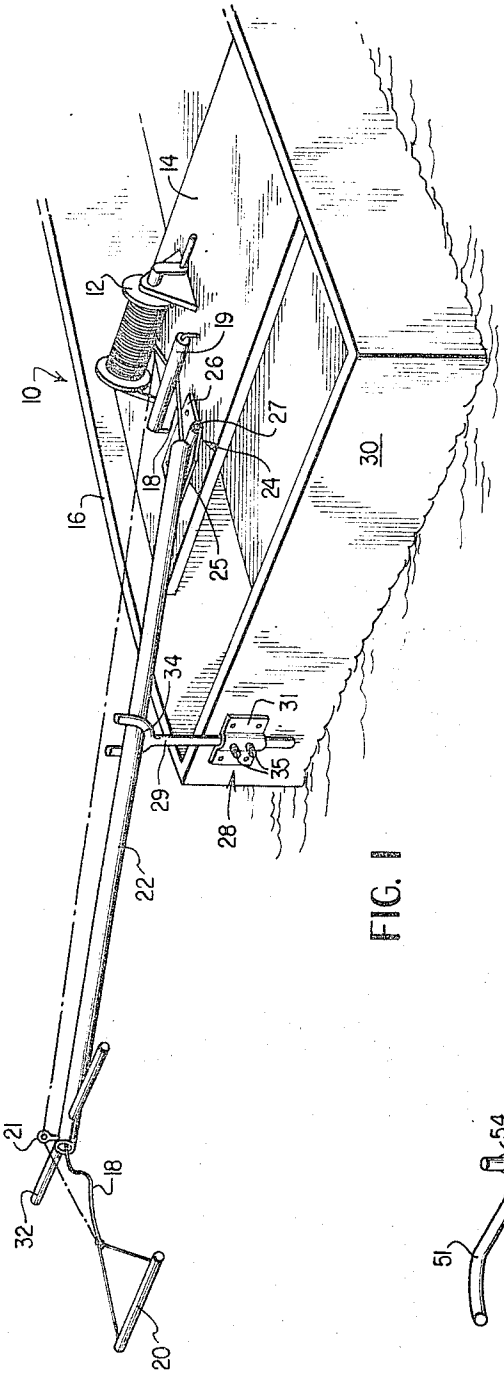


FIG. 1

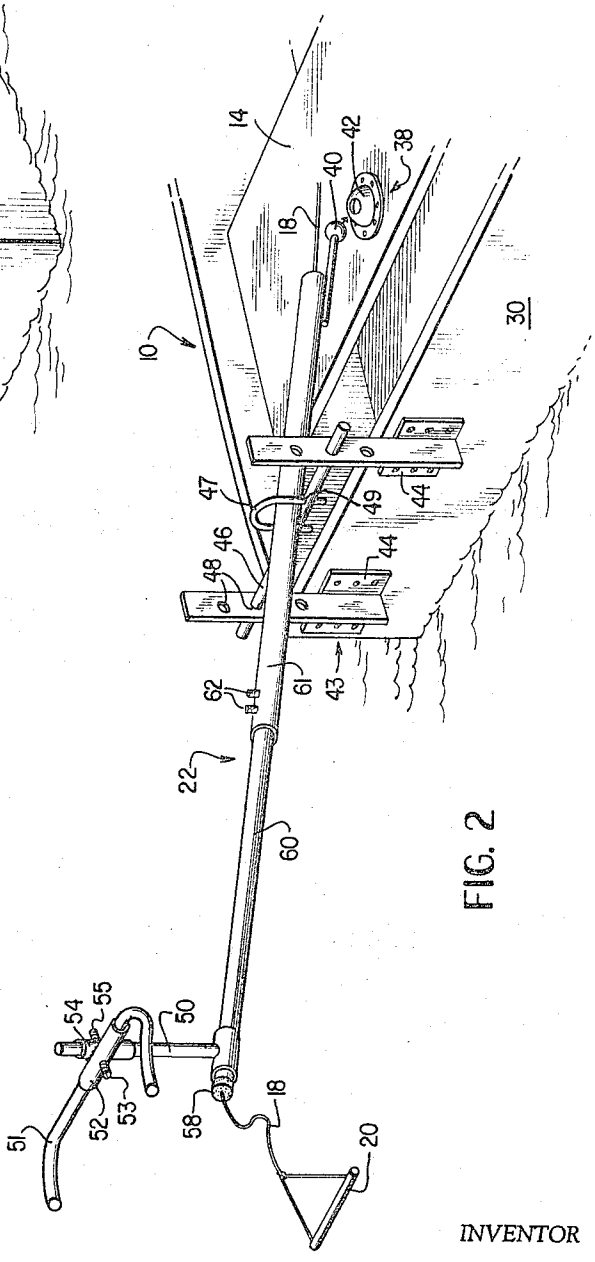


FIG. 2

INVENTOR

HENRY C. BAKER

BY Shanley & O'Neil

ATTORNEY

United States Patent Office 3,326,175 Patented June 20, 1967

3,326,175

WATER SKIING AID

Henry C. Baker, P.O. Box 102, Bradley, Maine 04411

Filed Oct. 15, 1965, Ser. No. 496,599
16 Claims. (Cl. 114—235)

This invention relates to water skiing apparatus and more particularly to a support means adapted to be secured to a towing vessel and to be used by a water skier in assuming and leaving the planing position more easily and safely than heretofore possible.

Among other aquatic sports, water skiing is enjoying an increasing popularity with many individuals learning or attempting to learn to water ski. Especially for a novice, the most difficult portions of the average ski run are at the beginning and the end. At the start of the ski run the water skis are submerged, occasionally resting at least at their aft end upon the bottom of the body of water. For the skier to pass from this static pickup position to the planing position, the skier grasps the tow rope at its handle and the vessel proceeds underway, pulling the skier. A high rate of speed is necessary to lift the skier out of water into the planing position. During the period that the towing craft passes from rest to the necessary high speed, most upsets occur because the skier is subjected to forces from the skis, water and towing vessel when faced with the difficult problem of achieving and maintaining balance on the skis. For the inexperienced skier, subjection to these forces is an unfamiliar experience and to be buffeted about at ever-increasing speeds in a position of precarious equilibrium often results in confusion, panic, loss of balance and control over the skis, and upset.

Even if the novice successfully negotiates the pickup and planing stages of the ski run, he still must successfully perform the landing operation. Inexperienced skiers often misjudge the speed of the towing craft when they release the tow rope and head for shore. The landing procedure should be executed at low speeds for safety purposes. This has not been possible in the past with conventional equipment.

With the foregoing in view, a main object of this invention is to provide an auxiliary support means which is attachable to a towing vessel and which provides support for and aids the water skier during the pickup and landing stages of a ski run.

The foregoing and other objects are accomplished by this invention, which can be briefly described as an apparatus for assisting a water skier in assuming and leaving a planing position aft of a tow boat, which comprises elongated support means for supporting and assisting the skier in assuming and leaving the planing position and having fore and aft ends, connective means attached to the support means at the fore end thereof for securing the support means to the tow boat, and bracket means attachable to the tow boat in the stern thereof for maintaining the support means at a predetermined minimum height above the water level. As a further feature of the invention, handle bar means which may be adjustable are optionally provided at the aft end of the support arm to facilitate grasping by the skier.

These and other features, objects and advantages of the invention will appear more fully from the following detailed description which, when considered in conjunction with the accompanying drawings, discloses several embodiments of the invention for purposes of illustration only and not for definition of the limits of the invention. For the purpose of determining the scope of the invention, reference may be had to the appended claims.

In the drawings, wherein similar reference characters denote similar elements through the several views:

FIGURE 1 is a perspective view of a water skiing aid constructed in accordance with the principles of the invention and shown in place aboard a towing vessel.

FIGURE 2 is a partially exploded view, in perspective, of another embodiment of a water skiing aid constructed in accordance with the principles of the invention and also shown in place aboard a towing vessel.

Referring to the drawings in greater detail, in FIGURE 1, the novel ski-aid support is shown in position aboard a towing vessel, indicated generally at **10**. The vessel may be of any type, inboard or outboard motor, suitable for towing water skiers. Such craft may be provided with a winch or windlass **12** attached to a seat **14** or rail **16** of the boat. In the drawing, windlass **12** is shown secured to seat **14**. One end of a tow rope **18** is attached to the windlass **12**. A handle **20** is provided to facilitate seizure of the tow rope **18** shown partially reeled out in FIGURE 1. The tow rope extends from the windlass **12** and passes under a rope roller **19** to extend aft of the boat. In FIGURE 1, the tow rope is shown passing through the entire length of a support arm **22**, which is of tubular configuration. However, the tow rope may pass as shown by the phantom line in FIGURE 1 from the windlass **12** and externally of the support arm **22** to and through an eye, or the like, as indicated at **21** which may be secured to the aft end of the support arm **22**. This latter construction would be required in an embodiment wherein the support arm takes the form of a solid rod.

It will be observed that a pulley or other rope guiding means can be used in lieu of the rope roller shown at **19**.

The support arm **22** is attached at its forward end to seat **14** or other convenient mounting means located in the towing vessel **10** between the bow and stern thereof preferably but not necessarily by means of a jointed connection indicated generally at **24**. In the embodiment of the invention illustrated in FIGURE 1, the connection is jointed and consists of a hinge. Leaf **25** of the hinge is attached to the support arm **22** and leaf **26** is secured to the mounting means, in this case seat **14**. The leaves are joined by the conventional pin **27**. It will be noted that this type of connection permits movement of the support arm **22** in a vertical plane so that it can be pivoted about pin **27** to extend forward in the boat for compact storage or other purposes. This construction further permits rapid removal of the support arm by extracting pin **27**.

The support arm **22** is supported intermediate its ends by bracket means, indicated generally at **28**, secured to the tow boat at or near the transom thereof. In FIGURE 1 the bracket means **28** is shown secured to the transom **30** of the vessel **10**. The bracket means acts as a fulcrum for the support arm **22** when the latter bears force exerted upon it by the water skier. In the embodiment shown in FIGURE 1, bracket means **28** takes the form of a rod **29** with yoke means **34** in the upper end thereof to receive the support arm **22**. The rod **29** may be directly attached to transom **30** of the tow boat or may be constructed to be vertically adjustable as shown, received in fixture **31** which is secured to transom **30**. Setscrews **35** permit adjustment of the rod **29** to the desired height. The rod **29** may then be secured in the desired position by tightening the setscrews **35**. Handlebars **32** may be provided to facilitate seizure of the support arm **22** by the skier.

In operation, the tow rope **18** is disposed at the aft end of the support arm **22**, the skier grasps the support arm **22**, preferably at handle bars **32**, and the tow boat proceeds under way. By exerting pressure downwardly on support arm **22**, the skier can support part or all of his weight on the boat, thereby performing at low speeds, part or all of the task of lifting the skier into planing position, formerly performed solely by high towing speeds creating a lifting force on the skis. By means of the support device of the present invention, the skier can achieve the planing position and perfect his balance at lower speeds than here-

tofore possible. Once this condition is attained, the skier can grasp the tow rope handle and release support arm 22. The tow craft is accelerated to normal towing speed and the tow rope is reeled out to the normal skiing position. At the end of the ski run, the skier is wound in by winch 12 at normal speed to grasp support arm 22, the boat slows and the skier, supported through the deceleration of the towing vessel, is prepared for landing at a safe low speed.

In the embodiment of the invention illustrated in FIGURE 2, connective means 38 by which support arm 22 is attached to the towing vessel 10 is a ball-and-socket joint. Ball segment 40 is affixed to the support arm 22 and socket member 42 is secured to the seat 14, although it is readily apparent that the position of these two elements could be reversed. The advantage provided by the ball and socket type of construction resides in the fact that the support arm is free to move in horizontal, vertical or angular planes. The particular advantage with respect to freedom of movement in a horizontal direction is that such permits the support arm 22 to move to follow the skier as he passes from port to starboard aft of the tow boat. Freedom of movement in the vertical plane permits pivoting of the support arm about socket 42 for compact storage. Angular freedom facilitates manipulation of the support arm 22 as well as permits the arm to more freely track the skier in his movements during the planing stage of the ski run.

When the connective means takes the form of a ball-and-socket joint, as in FIGURE 2, a supporting bracket means 43 may comprise spaced, vertically extending members 44, secured to the transom 30 of the tow boat, and a bearing bar 46 extending athwartship between the members 44. The bearing bar 46 acts as a fulcrum for the support arm 22. A plurality of vertically spaced apertures 48 is provided in each member 44 to permit adjustment of the elevation of bar 46 and thereby the elevation of the support arm 22. Yoke means 47 are provided for preventing support bar 22 from sliding horizontally along bar 46, to provide a firm support to the skier during the initial and final stages of a ski run. The yoke means 47 should be disengaged during the planing portion of the ski run to permit the support arm 22 to freely track the skier in his movements. Apertures 49 are provided in bar 46 to receive the forks of yoke 47.

An alternative construction of support handle-bars 51 contemplated by this invention is also illustrated in FIGURE 2. In this embodiment, a vertical member 50 is attached to the aft end of the support arm 22. The member 50 will ordinarily extend upwardly but can be extended downwardly in a situation wherein the towing vessel is equipped with a high transom. Handlebars 51 extend through sleeve 52 which is attached to sleeve 54 on member 50. A setscrew 53 is provided in sleeve 52 for angular, pivotal adjustment of the handlebars 51 about the longitudinal axis of sleeve 52. Setscrews 55 in sleeve 54 permit adjustment of the entire handlebar assembly in a vertical direction along member 50 by sliding sleeve 54 along member 50.

If desired, a rubber or plastic guide for the tow rope may be disposed at the aft end of the tubular body 22. Such a device is shown in position at 58 in FIGURE 2 and is desirable in that it serves to prevent abrasion of the tow rope by the edges of the support arm 22.

The support arm 22 which forms a basic element of the invention may be of unitary construction as shown in FIGURE 1 or it may be constructed of a plurality of telescoping tubes as shown in FIGURE 2 at 60 and 61. In the latter event, clamping means such as setscrews 62 must be provided to secure the tubes in the desired position. The length of the support arm 22 can be varied to fit the requirements of the particular towing equipment with which it is to be used. However, a sufficient length must extend aft of the tow boat to keep the skier away from the immediate vicinity of the screw and wash. As an example, a support arm about 10 feet in length with about two-thirds thereof extending aft of the fulcrum at the transom has been found adequate for use with small outboard runabouts.

It is understood that modifications in structure of the specific embodiments described may be resorted to without departing from the invention claimed.

What I claim is:

1. Water ski towing apparatus, comprising
a tow boat having a transom,
a windlass carried by the tow boat,
rigid, elongated support members for supporting and assisting a skier in assuming and leaving a planing position,
the elongated support means having a fore end portion secured to the tow boat at a location which is intermediate the bow and stern of the tow boat and a substantial distance forward of the stern,
the elongated support means extending axially relative to the tow boat to an aft end portion located aft of the stern of the tow boat,
the elongated support means having a portion intermediate its fore and aft end portions which is disposed above the transom of the tow boat,
connective means associated with the fore end portion of the elongated support means, and securing the elongated support means to the tow boat,
bracket means secured to the tow boat at the stern thereof and projecting above the transom of the tow boat in supporting engagement with the elongated support means at the intermediate portion thereof for maintaining the elongated support means at a predetermined height above water level while supporting and assisting the skier,
a tow rope having one end attached to the windlass,
means for guiding the tow rope from the windlass to the aft end portion of the elongated support means, and
handlebar means associated with the aft end portion of the elongated support means and providing the sole rigid supporting contact for the skier.

2. Water ski towing apparatus as defined in claim 1, wherein
the bracket means comprises a vertically extending rod member, yoke means associated with the upper end of the rod member and projecting vertically above the transom for receiving and supporting the elongated support means, a fixture secured to the transom of the tow boat and axially receiving a portion of the rod member below the yoke means, and means for securing the rod member in the fixture.

3. Water ski towing apparatus as defined in claim 2, wherein the means for securing the rod member in the fixture comprises adjustable means for securing the rod member at a selected position axially along the rod member to adjust the predetermined height of the elongated support means above the water level.

4. Water ski towing apparatus as defined in claim 2, wherein
the connective means comprises a hinge having one leaf fixedly secured to the elongated support means, another leaf fixedly secured to the tow boat and a hinge pin transversely disposed relative to the elongated support means and interconnecting the leaves.

5. Water ski towing apparatus as defined in claim 4, wherein
the elongated support means is vertically swingable about the hinge pin to extend from the connective means forward on the tow boat.

6. Water ski towing apparatus as defined in claim 2, wherein the handlebar means comprises a vertically extending member associated with the aft end portion of the elongated support means, a horizontally extending sleeve associated with the vertically extending member, a horizontal member extending axially through the sleeve and having end portions curved to extend aft of the vertical member, adjustable means for securing the horizontal sleeve at a selected position axially along the vertical

member, and adjustable means for securing the horizontal member against rotation in the sleeve at a selected angular position.

7. Water ski towing apparatus as defined in claim 1, wherein the elongated support means comprises an elongated tubular member, and

the means for guiding the tow rope from the windlass to the aft end portion of the elongated support means includes the open cross section of the tubular member.

8. Water ski towing apparatus as defined in claim 7, and further comprising,

tow rope bearing means associated with the aft end portion of the elongated tubular member for preventing abrasion of the tow rope on the aft end portion of the elongated tubular member.

9. Water ski towing apparatus as defined in claim 1, wherein

the bracket means comprises two horizontally spaced vertical members secured to and projecting vertically above the transom of the tow boat, and a bearing bar extending athwartship between the spaced vertical members, supported by the spaced members at a location above the transom of the tow boat and in supporting engagement with the elongated support means, the elongated support means being slidable athwartship along the bearing bar between the spaced vertical members, and wherein

the connective means comprises a ball-and-socket connection.

10. Water ski towing apparatus as defined in claim 9, wherein

the elongated support means is vertically swingable about the ball-and-socket connection to extend from the connective means forward on the tow boat.

11. Water ski towing apparatus as defined in claim 9, wherein

the bracket means further comprises means defining a plurality of vertically spaced openings in each of the spaced vertical members for receiving the bearing bar at a selected height to adjust the predetermined height of the elongated support means above the water level.

12. Water ski towing apparatus as defined in claim 9, wherein the bracket means further comprises removable means for temporarily preventing sliding movement of the elongated support means athwartship along the bearing bar.

13. Water ski towing apparatus as defined in claim 1, wherein the handlebar means comprises a vertically extending member associated with the aft end portion of the elongated support means, a horizontally extending sleeve associated with the vertically extending member, a horizontal member extending axially through the sleeve and having end portions curved to extend aft of the vertical member, adjustable means for securing the horizontal sleeve at a selected position axially along the vertical member, and adjustable means for securing the horizontal member against rotation in the sleeve at a selected angular position.

14. Water ski towing apparatus as defined in claim 1, wherein the elongated supporting means comprises a plurality of tubes disposed in telescoping relationship, and means for securing the tubes in a selected position against telescoping movement.

15. Water ski towing apparatus for assisting a water skier in assuming and leaving a planing position, comprising the combination of

a tow boat having a transom,

a windlass attachable to the tow boat,

a tow rope having one end attachable to the windlass,

elongated tubular support means for supporting and assisting the skier in assuming and leaving the planing position, the tubular support means being annularly disposable about the tow rope intermediate the ends thereof in its passage to the windlass, and having fore and aft ends,

hinge means attached to the support means at the fore end thereof for jointedly securing the support means to the tow boat at a location intermediate the bow and stern thereof,

vertically adjustable bracket means attachable to the transom of the tow boat for supporting the support means at a location intermediate the fore and aft ends thereof, and for maintaining the tubular support means at a predetermined minimum height above the water level while supporting and assisting the skier,

handlebar means attached to the aft end of the elongated support means and extending horizontally therefrom, and providing the sole rigid supporting contact for the skier, and

means for vertically and angularly adjusting the handlebar means.

16. Water ski towing apparatus for assisting a water skier in assuming and leaving a planing position, comprising the combination of

a tow boat having a transom,

a windlass attachable to the tow boat,

a tow rope having one end attachable to the windlass,

elongated tubular support means for supporting and assisting the skier in assuming and leaving the planing position, the tubular support means being annularly disposable about the tow rope intermediate the ends thereof in its passage to the windlass, having fore and aft ends, and comprising at least two telescoping tubes,

hinge means attached to the support means at the fore end thereof for jointedly securing the support means to the tow boat at a location intermediate the bow and stern thereof,

vertically adjustable bracket means attachable to the transom of the tow boat for supporting the support means at a location intermediate the fore and aft ends thereof, and for maintaining the tubular support means at a predetermined minimum height above the water level while supporting and assisting the skier, and

handlebar means attached to the aft end of the elongated support means and extending horizontally therefrom, and providing the sole rigid supporting contact for the skier.

References Cited

UNITED STATES PATENTS

2,816,310	12/1957	Nale	114—235 X
2,821,726	2/1958	Correll	114—43.5 X
2,883,684	4/1959	Correll	114—43.5

MILTON BUCHLER, *Primary Examiner.*

T. M. BLIX, *Assistant Examiner.*