This invention relates to boating equipment and more particularly to a water ski pole assembly adapted to be mounted on the stern transom of a small boat in a manner to prevent a tow line from becoming entangled in the power operated propeller at the stern of the boat and, also, to maintain the outer end of the tow line at a safe distance from such propeller at all times.

Water skiing has become extremely popular in recent years, especially since the development of relatively high horsepower outboard power plants adapted to be mounted exteriorly of the boat on the relatively flat transom forming the stern of the boat. It can be appreciated that there is a relatively high degree of danger involved in towing a skier behind a boat having an outboard motor because of the fact that many times the tow line becomes entangled in the engine drive shaft enclosure or the propeller of the motor, or the skier must be relatively close to the boat in a close proximity to the propeller of the engine in order to receive the tow line from other persons positioned within the boat.

It is, therefore, the primary object of this invention to provide a water ski pole assembly adapted to be mounted on the rear transom of a small boat in a manner so that the outer end of a tow line adapted for pulling a skier is maintained in a safely spaced relationship to the engine propeller disposed at the rear of the boat.

Another important object of the present invention is to provide a ski pole assembly as described which includes an elongated tubular element suitably mounted on the transom of the boat, extending rearwardly from the frame and receiving the tow line adapted for pulling a skier so that such line is always maintained in a spaced relationship to the propeller of the boat.

Another important object of the instant invention is to provide an assembly wherein the tubular element reciprocally or slidably receive the tow line so that the effective length of such line extending from the outer end of the tubular element may be selectively varied by a person positioned within the boat.

An additional important aim is to provide a water ski pole assembly wherein is included a substantially U-shaped frame adapted to be secured to and extend rearwardly from the transom by suitable clamp means, and wherein the tubular element slidably receiving the tow line is pivotally attached to the frame so that when the boat makes a turn, the tubular element pivots with respect to the frame and thereby eliminates strain on the element normally extending rearwardly from the boat.

Other important objects of the instant invention relate to the provision of a water ski pole assembly as referred to above wherein the tubular element is removably attached to the frame so that the assembly may be readily dismounted for storage purposes; to the provision of an assembly wherein the frame is U-shaped so that the same is particularly adapted to be disposed in a clear relationship to an outboard motor mounted on the stern transom of the boat, and wherein the tubular element is mounted on the bight portion of the frame so that the effective point of attachment of the tow line to the boat remains in a substantially central position relative to the transom; to the provision of guide means on the frame slidably receiving the tow line and positioned adjacent a point of attachment of the frame to the transom so that entanglement of the tow line with the motor is prevented under all circumstances; to the provision of a coil spring pivotally connecting the tubular element with the frame so that such tubular element may be pivotally moved in all directions, as necessary; and to other lesser, important objects and details of construction which will become obvious or be more fully explained as the following specification progresses.

In the drawing:

Figure 1 is a fragmentary, perspective view of a water ski pole assembly embodying the concepts of the present invention and showing the same mounted in place on the rear transom of a small boat having an outboard motor secured thereto;

Figure 2 is an enlarged, perspective view of a part of the ski pole assembly illustrated in Fig. 1 and showing the same removed from the boat and the tubular element pivoted out of the way, as illustrated.

Figure 3 is a fragmentary, vertical, cross-sectional view showing the coil spring and means of attaching the same to the frame, as well as structure for attaching the tow line receiving, tubular element to the spring.

Briefly, the present water ski pole assembly includes a substantially U-shaped frame adapted to be mounted on the stern transom of a small boat in rearwardly extending relationship thereto, and an elongated tubular element pivotally mounted on the bight portion of the frame and normally extending rearwardly therefrom, for maintaining a tow line threaded through the tubular element in spaced relationship to the drive shaft enclosure and propeller of an outboard motor or other type of power operated propeller assembly positioned at the stern of the boat. The tow line extends from within the boat, through the tubular element to a position in safely spaced relationship to the propeller of the boat so that danger of the line becoming entangled in the propeller is eliminated and furthermore, serving to eliminate the necessity of a skier coming into close proximity to the power plant of the boat in order to receive the tow line.

A water ski pole assembly is illustrated in the drawing as being positioned on the stern transom 12 of a small boat 14 having an outboard motor 16 mounted centrally on transom 12 and positioned rearwardly of the same with respect to boat 14. As indicated in Fig. 1, the drive shaft enclosure 18 of motor 16 extends downwardly from transom 12 so that the propeller (not shown) thereon faces rearwardly of boat 14.

Assembly 10 includes a substantially U-shaped frame broadly numerated 10 and provided with a pair of elongated legs 22 and 24 interconnected at their normally outermost ends by a bight portion 26, as being noted in Figs. 1 and 2 that legs 22 and 24 converge inwardly as bight portion 26 is approached. Means for attaching frame 20 to transom 12 includes a substantially U-shaped clamp generally designated 28 and attached to the outermost ends of respective legs 22 and 24 remote from bight portion 26. Each clamp 28 has a pair of normal upright, parallel leg portions 30 and 32 interconnected by a bight 34. As clearly indicated in Fig. 2, triangular gussets 36 are attached to respective legs 22 of frame 20 and leg portions of clamp 28. Members 38 threaded into leg portions 32 of the clamp 28 of the frame 20 to be securely clamped to transom 12 upon rotation of members 38 to move the inner ends thereof into firm engagement with the inner surface of transom 12.
A rectangular ear 40 secured to right portion 26 of frame 20 and disposed in a normally upright position serves as means for supporting elongated, relatively lightweight tubular element or tube 42 in a manner to hereinafter described. Means for pivotally mounting the normally inner end 44 of tube 42 on ear 40 includes an elongated coil spring 46 having substantially cylindrical end portions 48 and 50 and an integrally elliptical middle section 52 having a substantially greater transverse diameter than cylindrical portions 48 and 50. Coil spring 46 is releasably attached to ear 40 by virtue of a cap screw 54 provided with an annular flange 56 of greater diameter than perforation 58 in ear 40, disposed on the inner face of ear 40 and having an integral boss portion 60 extending through perforation 58. Cap screw 54 has an elongated tow line receiving bore 62 therethrough, and boss 60 is externally threaded in a manner to receive an annual fitting 64, it being noted that fitting 64 has an internal passage 66 threaded in a manner to complementarily engage the externally threaded portion of boss 60. Cylindrical portion 48 of coil spring 46 is telescoped over fitting 64 as indicated in Fig. 3 and may be rigidly secured to the same in any suitable manner.

Another fitting 68 is provided at the opposite end of spring 46 and includes a boss 70 telescoped within cylindrical portion 50 of spring 46 and provided with an annular flange 72 of substantially greater transverse width than boss 70. Fitting 68 has an internal bore 74 which is threaded adjacent flange 72 thereof in a manner to receive a tubing fitting 76, as clearly shown in Fig. 3. The normally outermost end 78 of tubing fitting 76 is externally threaded to complementarily receive a spline 80 and it is to be noted that the end 78 of tubing fitting 76 is substantially frusto-conical in configuration to receive the flared end 44 of tube 42. Fitting 68 and elongated passage 82 therethrough are integrally aligned with bore 74 and tube 42, and it can thus be seen that tube 42 may be readily removed from fitting 76 by merely unscrewing spline 80 from tubing fitting 76 and thus, storage and mounting and removal of assembly 10 from transom 12 is facilitated. It can also be recognized that when it is not desired to pull a skier behind boat 14, tube 42 may be removed from fitting 76 and replaced within boat 14, and frame 20 in no manner interferes with operation of motor 16.

Spring 46 between ear 40 and tube 42 permits the latter to swing in any direction during use of assembly 10 and therefore, it can be seen that when boat 14 is turned, tube 42 remains in linear alignment with line 84 and thus, all strain on tube 42 is eliminated during turning of the boat. In this manner, the entire assembly may be made of relatively lightweight materials, such as aluminum, which are not subject to corrosion and may be manufactured at a low unit cost.

It can be appreciated that in lieu of the tow member 96 attached to right portion 26 of frame 20, another tube 42 and spring 46 may be attached to frame 20. It is obvious that many modifications such as this may be made to the present invention and, the effective length of tube 42 may be varied to suit individual circumstances. Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. A water ski towing assembly for boats having a power operated propeller at the stern thereof, said assembly comprising a frame mounted on the stern transom of said boat; an elongated tubular element; means pivotally mounting one end of the element on the frame with the opposite end thereof normally extending rearwardly from the boat and terminating in horizontally spaced relationship to said stern transom of the boat and thereby the propeller; and an elongated tow line reciprocally threaded through said element and extending from said opposite end of the line in a manner to maintain in spaced relationship to said propeller, said mounting means having a passage formed therethrough, the inner end of the line passing through said passage and being disposed within the boat whereby the effective length of said line extending from said outer end of the tubular element may be selectively varied from within the boat.

2. A water ski towing assembly as set forth in claim 1 wherein said means pivotally mounting the tubular element on the frame includes an elongated coil spring, one
5. A water ski towing assembly as set forth in claim 1 wherein said frame is substantially U-shaped in configuration and includes a pair of spaced legs and a bight portion interconnecting corresponding ends of the legs, there being clamp means on the opposite extremities of the legs for clamping the frame to said transom with said bight portion being disposed in rearwardly spaced relationship to the transom and thereby the boat.

6. A water ski towing assembly as set forth in claim 2 wherein is provided upstanding ear means on said bight portion, said one end of the spring being releasably attached to said ear means.

7. A water ski towing assembly as set forth in claim 5 wherein is provided tubular guide means on one of the legs adjacent the clamp means thereon and slidably receiving the tow line.

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