June 16, 1953 C. C. SWONGER 2,642,025

CLAMP-ON ANCHOR LINE SHEAVE FOR SMALL BOATS

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Fig. 1.

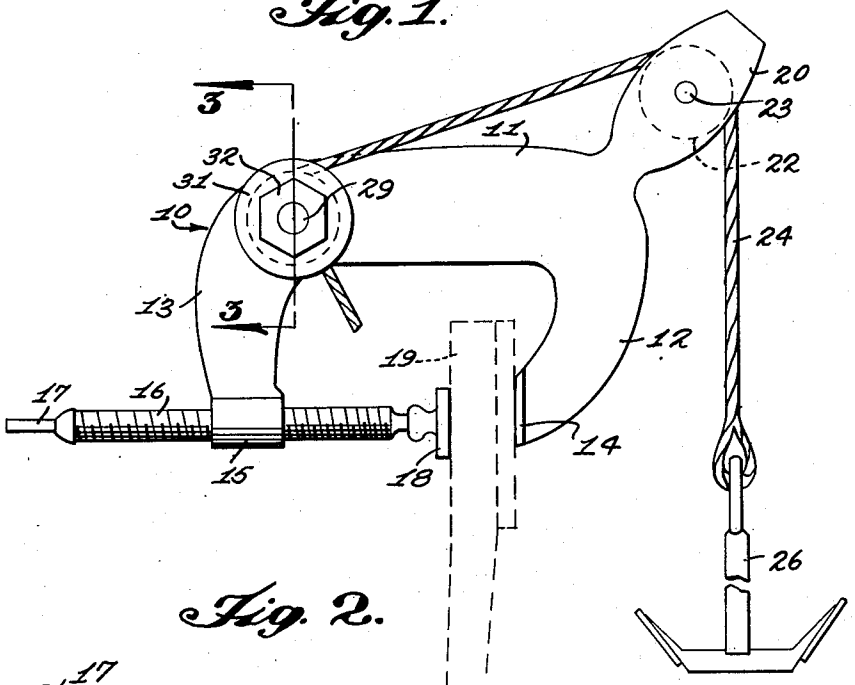


Fig. 2.

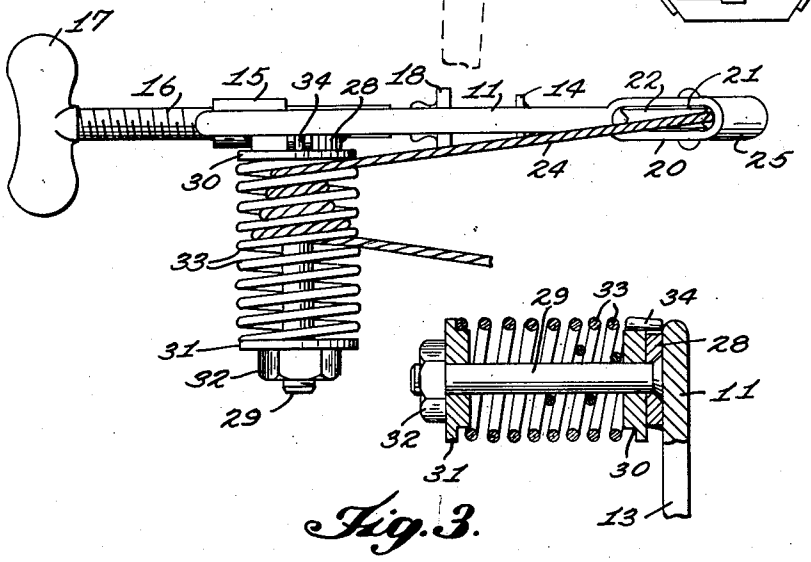


Fig. 3.

INVENTOR

CECIL C. SWONGER

BY

McMorrow, Berman & Davidson

ATTORNEYS

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CLAMP-ON ANCHOR LINE SHEAVE FOR SMALL BOATS

Cecil C. Swonger, St. Marys, Ohio

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2 Claims. (Cl. 114—210)

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This invention relates to clamp-on sheave assemblies, and more particularly to a clamp-on anchor line assembly for a small boat, such as a row boat.

It is among the objects of the invention to provide an improved sheave assembly which can be clamped onto a supporting structure, such as the gunwale of a row boat, to carry a line, such as an anchor line, over the supporting structure and assist in raising and lowering a line-carried weight, such as an anchor; which includes a cleat or bit for holding an anchor line against running over the sheave; which can be readily clamped onto a boat gunwale at any desired location along the gunwale without damage to the boat; which positions the sheave outwardly of the boat gunwale on which it is mounted, so that, as an anchor is raised it will swing clear of the boat; and which is simple and durable in construction, economical to manufacture, easy to use, and neat and attractive in appearance.

Other objects and advantages will become apparent from a consideration of the following description and the appended claims in conjunction with the accompanying drawing, wherein:

Figure 1 is a side elevational view of a clamp-on, anchor line sheave illustrative of the invention;

Figure 2 is a top plan view of the sheave assembly illustrated in Figure 1; and

Figure 3 is a fragmentary cross-sectional view on the line 3—3 of Figure 1.

With continued reference to the drawing, the sheave assembly comprises a C-shaped frame, generally indicated at 10, including an elongated intermediate portion 11 and legs 12 and 13 disposed one at each end of the intermediate portion and extending substantially perpendicularly from the same side of the intermediate portion, the intermediate portion and both legs preferably having their longitudinal center lines substantially in a common plane. The leg 12 is curved in a direction away from the corresponding end of the intermediate portion and toward the distal end of the leg 13 and carries on its distal end an abutment pad 14, which is opposed to the distal end of the leg 13. The leg 13 has on its distal end an internally screw-threaded sleeve formation 15, the longitudinal center line of which, when extended, intersects the abutment pad 14 on the leg 12.

A screw shaft 16 is threaded through the sleeve formation 15 and has on its end remote from the leg 12 a wing formation 17 for turning the shaft,

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and an abutment washer 18 is pivotally mounted on the other end of the screw shaft 16 and opposed to the abutment pad 14, so that a supporting structure, such as a boat gunwale 19, can be securely clamped between the abutment pad 14 and the abutment washer 18 with the intermediate portion 11 of the frame extending over the top edge of the gunwale.

A lug 20 projects outwardly from the frame at the end of the intermediate portion 11 adjacent the leg 12 and has its longitudinal center line disposed substantially in the plane including the longitudinal center lines of the intermediate portion and the legs 12 and 13 and inclined outwardly relative to the longitudinal center line of the intermediate portion 11 and the longitudinal center line of the leg 12. This lug is bifurcated or loop shaped, and has an opening 21 of elongated, substantially rectangular shape extending therethrough from one edge to the other. A sheave or pulley 22 is disposed in the opening 21 in the lug 20, and journaled therein on an axle pin 23 for rotation about an axis substantially perpendicular to the plane including the longitudinal center lines of the intermediate portion 11 and legs 12 and 13 of the bracket frame.

In the use of the device, a rope or line 24 is carried over the sheave 22, and the outer portion 25 of the loop-shaped bracket extends over the line and provides a guard which prevents the line from being moved off of the sheave.

In the arrangement illustrated, the longitudinal center line of the lug 20 inclines outwardly at an angle of approximately 45° to the longitudinal center line of the intermediate portion 11 of the bracket, so that the sheave 23 is disposed above and outwardly of the boat gunwale 19 on which the sheave assembly is mounted to cause an anchor 26 connected to the end of the line 20 depending from the sheave to swing clear of the side of the boat as the anchor is raised.

A disc or plate, preferably of circular shape, is disposed at one side against one side of the intermediate portion 11 of the clamp frame adjacent the proximal end of the frame leg 13 and is provided with a centrally located, countersunk aperture. A bolt 29 extends through the aperture in the plate 28 and has a beveled head disposed against the adjacent side of the intermediate portion 11 of the clamp frame and received in the countersunk portion of the aperture in the plate 28. This bolt projects laterally from the intermediate portion 11 of the frame with its longitudinal center line substantially perpendic-

ular to the plane including the longitudinal center lines of the intermediate portion and legs of the frame, and is screw-threaded at its outer end. Washers 30 and 31 are mounted on the bolt 29 adjacent the plate 28, and the outer screw-threaded end of the bolt, respectively, and a nut 32 is threaded onto the outer end of the bolt and bears against the outer side of the washer 31. A coil spring 33 surrounds the bolt 29 between the washers 30 and 31 and is centered relative to the bolt by having its end coils received in peripheral grooves provided in the washers 30 and 31 at the sides of the washers adjacent the spring. At its end adjacent the intermediate member 11 of the clamp frame the spring has an angularly disposed portion 34 which is seated in peripheral notches in the washer 30 and plate 33 to hold the spring against rotation relative to the bolt 29. The line 24 can be secured in adjusted position on the sheave assembly by wrapping a portion of the line about the bolt 29 between the coils of the spring 33, the spring frictionally engaging the line and providing a stopping action on the portion of the line wound around the bolt 29, so that the line will not pull around the bolt and run over the sheave 22. With this arrangement, the line can be quickly secured in adjusted position and quickly released, when desired.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are, therefore, intended to be embraced therein.

What is claimed is:

1. A clamp-on sheave assembly comprising a C-shaped frame including an elongated intermediate portion, legs projecting one from each end of said intermediate portion to the same side of and substantially perpendicularly to the latter, an abutment pad on the distal end of one of said legs facing the distal end of the other leg and an internally screw-threaded sleeve formation on the distal end of said other leg having a longitudinal center line intersecting said abutment pad, a screw shaft threaded through said sleeve formation and having a wing formation on its end remote from said abutment pad, an abutment washer rotatably mounted on the other end of said screw shaft and opposed to said abutment pad, a bifurcated lug projecting from said

intermediate portion at the proximal end of said one leg and having its longitudinal center line disposed substantially in a plane including the center lines of said intermediate portion and said legs and inclined outwardly from the center lines of said intermediate portion and said one leg, a sheave journaled in said lug for rotation about an axis substantially perpendicular to said plane, a bolt secured at one end to said intermediate portion at a location spaced from said lug and projecting laterally from said intermediate portion with its longitudinal center line substantially perpendicular to said plane, a nut threaded onto said bolt at the other end thereof, a washer on said bolt at the inner side of said nut, a washer on said bolt adjacent said intermediate portion of the frame, and a coil spring surrounding said bolt between said washers and connected at one end to said intermediate portion to frictionally engage and snub a line wound about said bolt.

2. A clamp-on sheave assembly for a small boat anchor line comprising a C-clamp adapted to clamp onto a boat gunwale and including a frame and a clamp screw, a lug projecting outwardly from said frame at one end thereof and having a longitudinal center line disposed substantially in a plane including the longitudinal center line of said frame, said lug having an opening extending therethrough along said plane, a sheave disposed in the opening in said lug and journaled in the latter for rotation about an axis substantially perpedicular to said plane, and means secured to said frame at a location spaced from said sheave and projecting laterally from said frame to receive and secure a line passing over said sheave, said means comprising a bolt secured at one end to said frame and projecting therefrom substantially perpendicularly to said plane, washers disposed on said bolt one near each end thereof, a nut threaded onto the other end of said bolt and bearing against the adjacent washer, and a coil spring surrounding said bolt between said washers with its ends supported on the corresponding washers.

CECIL C. SWONGER.

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