Feb. 13, 1962 H. E. BENNETT 3,021,088

WATER SKI TOW LINE REEL

Filed April 18, 1960 2 Sheets-Sheet 1

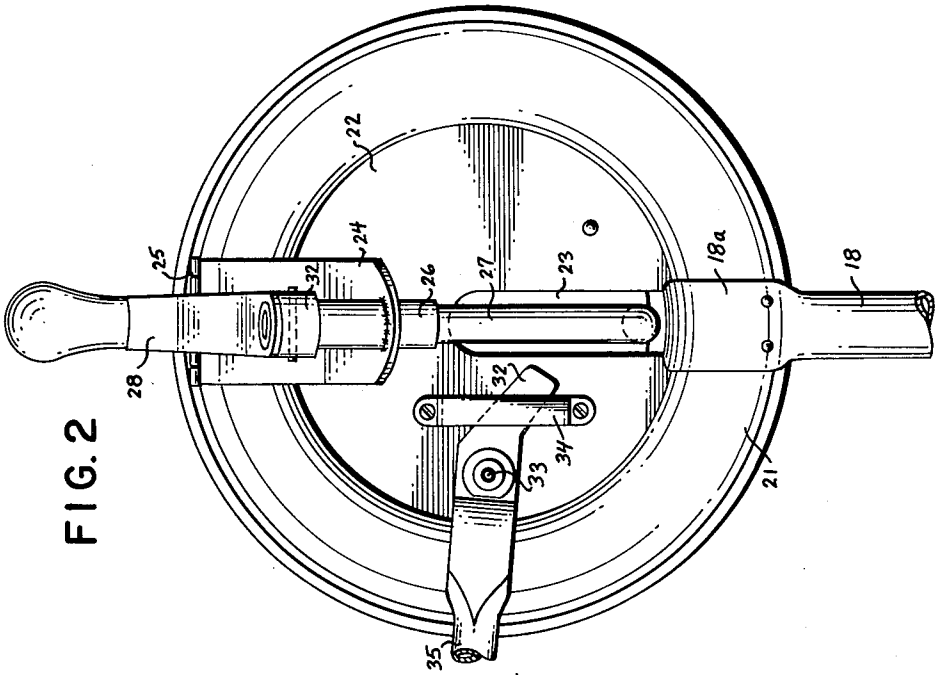


FIG. 2

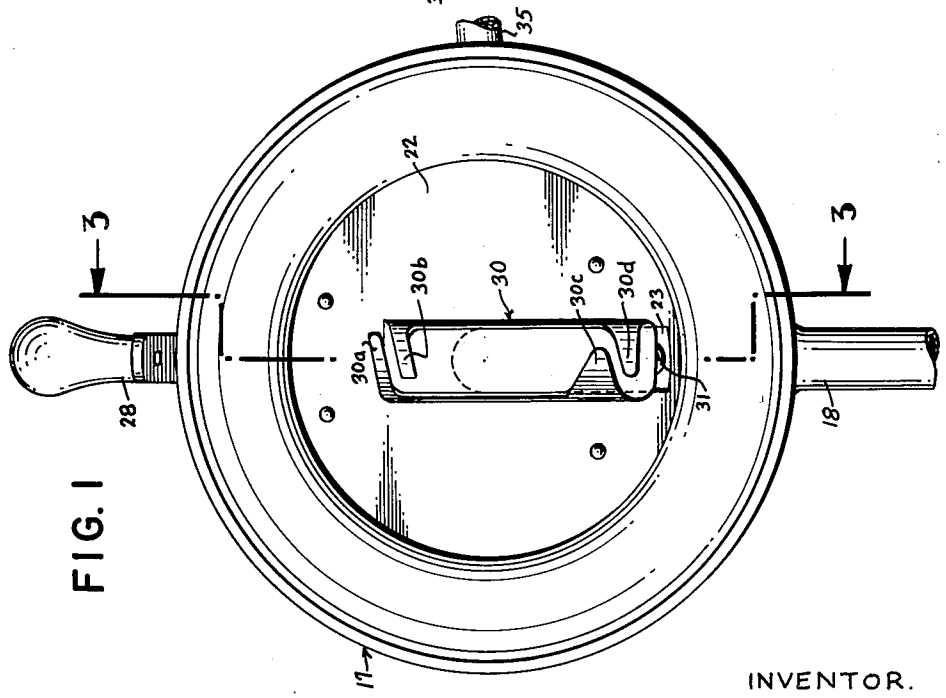


FIG. 1

INVENTOR.

HARVEY E. BENNETT

BY Barnes + Seed

ATTORNEYS

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WATER SKI TOW LINE REEL

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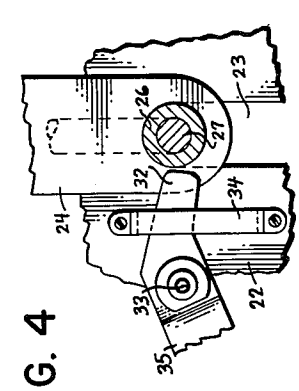


FIG. 4

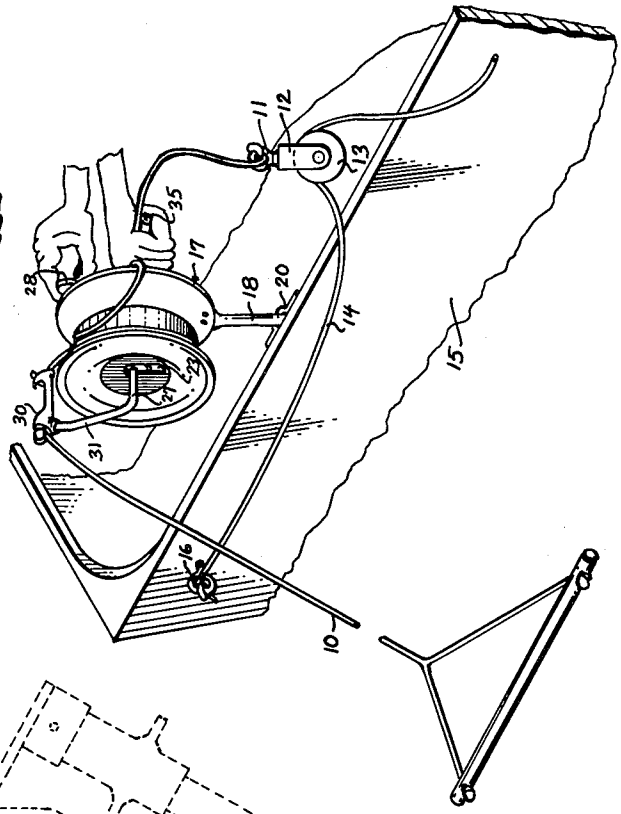


FIG. 5

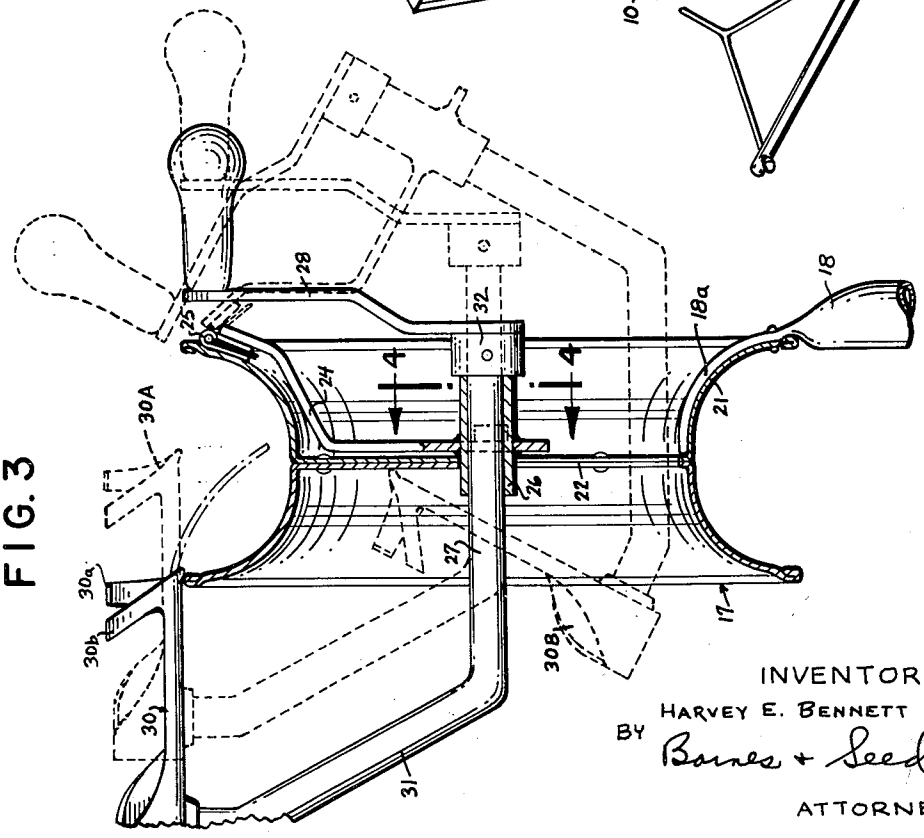


FIG. 3

INVENTOR.
HARVEY E. BENNETT
BY Barnes + Seed
ATTORNEYS

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3,021,088

WATER SKI TOW LINE REEL

Harvey E. Bennett, 11240 10th S., Seattle, Wash.

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9 Claims. (Cl. 242—86.8)

The present invention relates to an improved retrieving device for a water ski tow line.

It has been common practice in the water ski towing art to transfer the load from the tow line to the boat via a sheave working on a bridle which is mounted at the stern. The sheave travels back and forth on the bridle as the skier traverses the wake of the boat and thus smoothly shifts the tow load accordingly. This towing gear has heretofore had the disadvantage that the tow line was retrived to the boat by hand and often became tangled while being stored or played out.

The present invention aims to provide an improved reel apparatus of simple and economical construction which can be conveniently used with bridle-and-sheave tackle for storing, retrieving and playing out a water ski tow line.

Furthermore, the invention aims to provide such a reel which becomes completely free of the tow line when it is fully played out and yet can be easily set into operation to retrieve the tow line.

Still another object is to provide a retrieving device for water ski towlines which has a non-rotating reel and which is simple to mount in operative position on a boat.

The foregoing, with still additional objects and advantages of the invention, will appear and be understood in the course of the following description and claims, the invention consisting in the novel construction and in the adaptation and combination of parts hereinafter described and claimed.

FIGS. 1 and 2 are back front elevational views, respectively, of my reel assembly shown with its winding mechanism in inactive position.

FIG. 3 is a longitudinal vertical sectional view of the device taken along the line 3—3 of FIG. 1, but with the winding mechanism shown in line retrieving position.

FIG. 4 is a detail view of the latch arrangement taken as indicated by line 4—4 of FIG. 3; and

FIG. 5 is a perspective view illustrating my invention in operation on a boat shown fragmentarily.

Referring to FIG. 5, a ski tow line **10** is shown rigged in the conventional manner, and namely, tied to the eye of a swivel **11** which is carried by a pulley block **12** having its sheave **13** working on a bridle **14**. This bridle has its ends secured near the ends of the transom **15** of a boat as by eye bolts **16**.

The present invention provides a non-rotary reel **17** which has a post **18** depending therefrom to socket in a suitable fitting **20** secured to the boat. This post may be formed from a length of tubular stock having its upper end flattened at **18***a* and shaped to conform with the arch of the concave rim **21** of the reel, a rivet connection being used. The reel may be fabricated from a pair of flared dish sections placed end to end with their bottom walls riveted together to define the hub **22** of the reel and their flared side walls forming the rim **21**. A slot **23** is cut in the hub **22** starting with a center circle and continuing radially downward to the rim with the circle diameter. Directly above the slot at the front a bracket **24** is hinged at **25** to the rim **21** and follows generally the lateral contour of the reel to a bearing sleeve **26** which extends therethrough to fit into the slot **23** at the center of the reel when the bracket is swung down into active position as shown by the full line position thereof in FIG. 3. This bearing sleeve both slidably and turnably receives the shaft **27** of a winding assembly having a crank **28** at the forward end and a line guide **30** at the rear. To hold

this line guide the shaft **27** has an arm extension **31** forming an obtuse angle therewith and positioning the front of the line guide so as to just clear the back edge of the rim when the hub **32** of the crank **28** engages the forward end of the bearing sleeve **26**.

The line guide **30** is designed to permit a line to be readily introduced thereto and removed therefrom laterally when it is not under tension. To this end the guide has a semi-cylindrical bottom section with upper finger extensions **30***a–d* at its ends giving a generally spiral path therebetween when viewed from above (FIG. 1). Thus a relaxed line can be looped beneath the tips of one of the finger extensions at each end and drawn around the tip of the other fingers so that it is free to thread through the guide. It can be seen that the line can be readily removed by the reverse procedure.

To hold the winding assembly in active position there is provided a latch **32** which is pivoted at **33** to swing in a keeper **34** over the lower end portion of the bracket **24** which surrounds the bearing sleeve **26**. The latch is operated by an integral handle **35** which projects radially beyond the rim of the reel to provide a hand grip portion which can be held by one hand to keep the reel properly aimed while the other is being used to turn the crank **28**.

To retrieve a ski tow line **10** with my device the operator must first reach over the transom **15** and pull in a short section of the line. He then threads this through the guide **30** in the manner aforedescribed after the winding assembly has been latched in active position. With the line threaded through the guide the operator holds the portion of line between the guide and bridle **14** against the handle **35** with his left hand and starts to turn the crank **28** with his right (FIG. 5). As the crank turns the guide rotates around the reel thereby causing the line to wind thereabout. As indicated by the dotted position **30**A in FIG. 3 the guide can be pulled forwardly over the rim of the reel while the crank is being turned merely by at the same time pulling the crank **28** so that the shaft **27** slides as well as turns in the bearing sleeve **26**. By thus shifting the guide back and forth over the reel a level wind can be assured.

When it is desired to let out the tow line it must first be manually freed from the guide **30**. Then, with the crank **28** directly overlying the bracket **24**, the latch **32** is released by pushing up on the handle **35**. The rear part of the shaft **27** and its arm extension **31** are then free to swing forwardly through the slot **23** to lower the guide **30** into the inactive position indicated as **30**B in FIG. 3 and also shown in FIGS. 1–2. In this regard, the hinge **25** is preferably spring loaded to urge the winding mechanism forwardly toward its inactive position. When the skier is ready he grabs the free end of the tow line and it freely plays off the reel as the boat is driven away from him. As the last turn on the reel is reached the line frees from the reel and the entire load of the skier is taken by the bridle **14**. The handle **35** is useful in keeping the axis of the reel alined with the tow line during both the playing out and retrieving operations.

It is thought that the invention will have been clearly understood from the foregoing detailed description of the illustrated now-preferred embodiment. Modifications may be resorted to without departing from the spirit of the invention and I accordingly intend that no limitations are to be implied and that the hereto annexed claims be given a scope fully commensurate with the broadest interpretation to which the employed language fairly admits.

What I claim is:

1. A reel assembly for a water ski tow line comprising, a non-rotary reel adapted to be mounted on a boat, a bracket hinged to said reel and carrying a journal, said bracket being swingable to and from an active position whereat said journal is located at the center of the reel,

and line winding means mounted in said journal for winding a line about the reel when said bracket is in said active position.

2. A reel assembly for a water ski tow line comprising, a non-rotary reel adapted to be mounted on a boat and having an opening at the center which extends radially in at least one direction, a journal swingably mounted on said reel for movement to and from the center thereof, the swing axis of said journal being located diametrically opposite said one direction, and line winding means mounted in said journal and swingable therewith into and out of line winding position.

3. A reel assembly for a water ski tow line comprising, a non-rotary reel having a depending post adapted to be socketed on a boat for pivoting the reel about the post axis, a journal swingably mounted on said reel for movement to and from the center thereof, line winding means mounted in said journal for winding a line about the reel when said journal is at the center of the reel, and a handle for gripping the reel pivotally mounted on said reel and carrying a latch swingable with the handle into and out of journal locking position when said journal is at said center.

4. A reel assembly for a water ski tow line comprising, a non-rotary reel adapted to be mounted on a boat and having a center opening, a bracket hinged at one end of the reel and carrying a journal swingable with the bracket into and out of said center opening, a shaft operatively mounted in said journal, a crank mounted on one end of said shaft and a line guide carried by the other end thereof and adapted to detachably receive a line.

5. A reel assembly for a water ski tow line comprising, a non-rotary reel having a depending post adapted to be socketed on a boat for pivoting the reel about the post axis, a journal swingably mounted on said reel for movement to and from the center thereof, and line winding means mounted in said journal for winding a line about

the reel when said journal is at the center of the reel, said winding means being movable endwise in said journal for giving a level wind to the line.

6. A reel assembly for a water ski tow line comprising, a non-rotary reel adapted to be mounted on a boat and having a center opening, a bracket hinged at one end of the reel and carrying a journal swingable with the bracket into and out of said center opening, a shaft operatively mounted in said journal and having an extension at the other end of the reel extending toward the rim thereof, a line guide mounted on said extension, and means for turning said shaft.

7. The structure of claim 6 in which said means for turning the shaft comprises a crank mounted thereon at said one end of the shaft.

8. The structure of claim 6 in which said shaft is movable endwise in said journal for responsively shifting said guide endwise to give a level wind.

9. A reel assembly for a water ski tow line comprising, a non-rotary reel having a depending post adapted to be socketed on a boat for pivoting the reel about the post axis, a journal swingably mounted on said reel for movement to and from the center thereof, a handle for gripping the reel pivotally mounted on said reel and carrying a latch swingable with the handle into and out of journal locking position when said journal is at said center, a shaft in said journal, a crank mounted on one end of said shaft and a line guide carried by the other end thereof at the rim of said reel.

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