Sept. 5, 1961 H. H. WITTROCK 2,998,796

WATER SKI TOWING DEVICE

Filed Aug. 25, 1960

FIG. 1

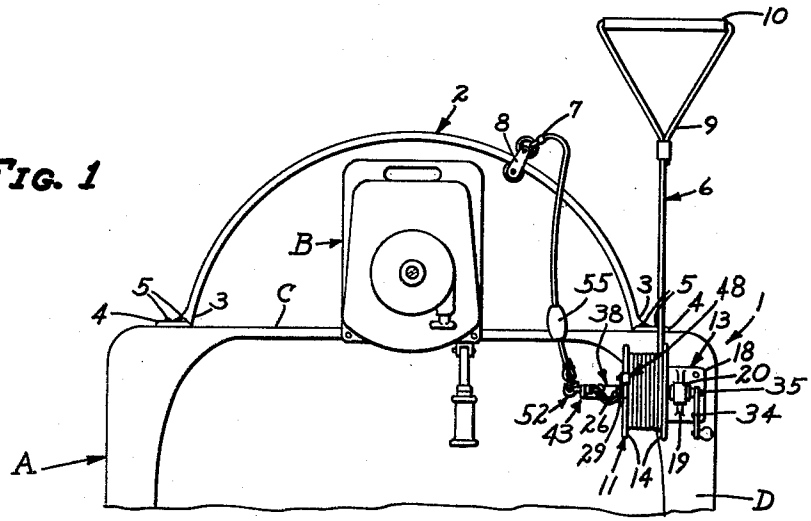


FIG. 2

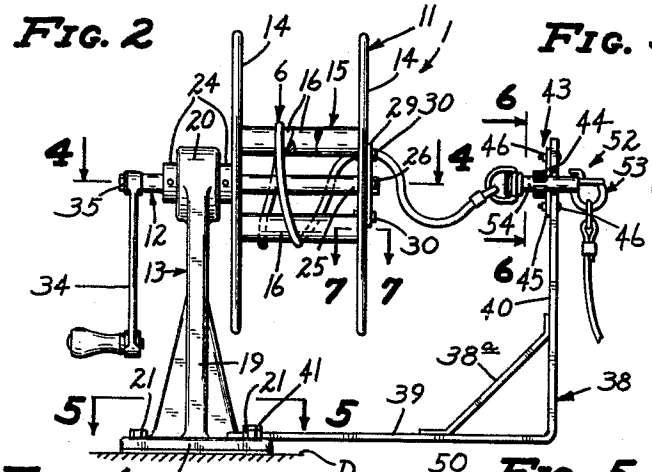


FIG. 3

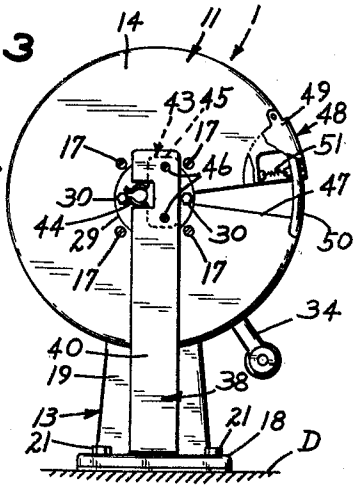


FIG. 4

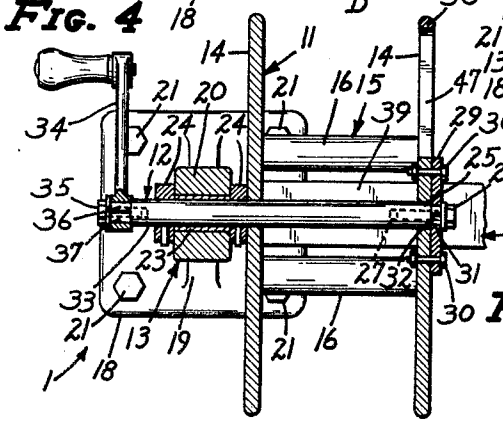


FIG. 5

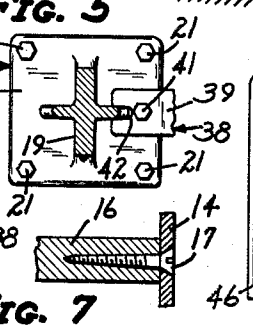


FIG. 6

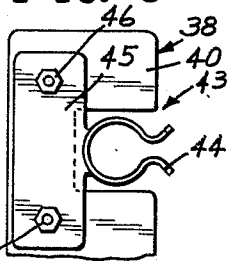


FIG. 7

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WATER SKI TOWING DEVICE

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4 Claims. (Cl. 114—235)

This invention relates generally to towing devices, and more particularly it relates to a device for towing water skiers behind a motor boat in connection with the well known aquatic sports.

An important object of this invention is the provision of a water ski towing device which is constructed so as to provide two bar means for securing one end of a ski tow rope to a motor boat in such manner that angularly acting towing stresses caused by the turning of the motor boat or the turning of the skier are transferred toward the center line of the motor boat.

Another important object of this invention is the provision of a water ski towing device which includes means for winding up, keeping and releasing the ski tow rope when the same is not in towing use.

Another very important object of this invention is the provision of a water ski towing device which includes a reel for winding up, keeping and releasing the greater intermediate portion of a ski tow rope when the same is not in towing use, the reel being in further combination with the tow bar means so that the end of the tow rope always remains secured to the boat so as to insure that the towing forces are always exerted directly upon the towing bar and not upon the reel.

Another object of this invention is the provision of a water ski towing device which virtiually insures that the water skier's movements from side to side will not effect the steering of the boat, and therefore is highly useful in the prohibition of the capsizing of motor boats used for towing water skiers and the like.

Another object of this invention is the provision of a water ski towing device which is highly efficient in the prohibition of snagged ski tow lines which is a common occurrence in the sport when the tow line is not in use by a skier and is being merely pulled behind the motor boat.

A still further object of this invention is the provision of a water ski towing device which may be conveniently mounted on various types and sizes of boats of the class used to tow water skiers.

Other objects of this invention reside in the provision of a water ski towing device which is simple in construction, positive in operation, strong and durable for its intended use and highly efficient in the vindication of its purpose.

The above and still further objects and advantages of this invention will become apparent from the following detailed specification, appended claims and attached drawing.

Referring to the drawings wherein like reference characters indicate like parts or elements throughout the several views;

FIG. 1 is a view in top plan of my invention as installed on the stern of a boat;

FIG. 2 is an enlarged view in elevation of a portion of my device as seen from the rear of a boat, some parts being broken away and some parts shown in section;

FIG. 3 is an enlarged view in side elevation of the portion of my device shown in FIG. 2, some parts being broken away and some parts shown in section;

FIG. 4 is a greatly enlarged view in horizontal section taken on the line 4—4 of FIG. 2;

FIG. 5 is a view in horizontal section taken on the line 5—5 of FIG. 2;

FIG. 6 is a greatly enlarged view in side elevation taken on the line 6—6 of FIG. 2, with some parts of FIG. 2 removed therefrom; and

FIG. 7 is a sectional view taken on the line 7—7 of FIG. 2.

Referring with greater particularity to the drawings, and specifically FIG. 1 thereof, the reference letter A represents generally the stern portion of a boat, the reference letter B represents an outboard motor secured to the boat A, and the reference letter C represents the transom of the boat A. The reference numeral 1 represents in the entirety my water ski towing device for use in combination with the boat A.

The towing device 1 comprisess a generally arcuately shaped generally rearwardly arched metal tow bar, represented generally by the reference numeral 2. The ends 3 of the tow bar 2 define bracket elements 4 which are adapted to be secured by suitable fasteners 5 near opposite sides of the transom C of the boat A. A ski tow rope, represented generally by the reference numeral 6, has one end 7 thereof secured to a pulley 8 which is adapted to ride on the tow bar 2 for generally freely sliding movements thereon intermediate the ends 3 thereof. The other end 9 of the ski tow rope 6 is equipped with a conventional handle 10.

A tow rope keeping reel, represented generally by the reference numeral 11, is generally freely rotatably journalled on a shaft 12 within a pedestal mounting, represented generally by the reference numeral 13, which is rigidly secured to the boat A in the vicinity of the transom C. The reel 11 comprises a pair of axially spaced generally parallel circular sides 14, which may be formed from any suitable material such as wood, hard board or metal, and a spool portion 15. The spool portion 15 of the reel 11 comprises a plurality of axially extending circumferentially spaced radially outwardly disposed dowels 16 which are preferably, and as shown particularly in FIG. 7, secured to the sides 14 of the reel 11 by means of a plurality of screws 17. The axis of the reel 11 is disposed generally transversely to the direction of travel of the boat A. The pedestal mounting 13 comprises a base portion 18, an upstanding integrally formed pedestal portion 19 and a shaft receiving integrally formed bearing head 20. The base portion 18 is preferably, and as shown particularly in FIGS. 4 and 5, generally rectangular and is rigidly secured to the deck D of the boat A by means of a plurality of fasteners 21. The bearing head 20 is apertured, and receives therein a circularly apertured bushing 23 which receives the shaft 12. The shaft 12 is locked within the bearing head 20 against axial displacement with respect thereto by a pair of conventional lock collars 24, one each disposed on axially opposite sides of the bearing head 20. The reel 11 is secured to one end 25 of the shaft 12 by means of a machine bolt 26 which is screwed within the screw threaded axially opening aperture 27 in the end 25 of the shaft 12. Interposed between the head of the bolt 26 and a side 14 of the reel 11 is an annular connecting plate 29 which is secured to said side 14 of the reel 11 by means of a plurality of fasteners 30. The connecting plate 29 has a centrally defined axially extended generally rectangular aperture 31 therein which receives a corresponding cross-sectionally rectangular portion 32 of the end 25 of the shaft 12. The other end 33 of the shaft 12 receives a crank 34 which is secured thereto in the same manner as the said one end 25 thereof is secured to the reel, i.e., by means of a machine bolt 35. The end 33 of the shaft 12 has a cross-sectionally rectangular portion 36 received within an axially opening rectangular aperture 37 in the crank 34.

As seen particularly in FIGS. 1–3, a generally L-shaped spring catch equipped bracket, represented generally by the reference numeral 38, is rigidly secured to the boat A in association with the pedestal mounting 13, in the manner hereinafter set forth. The bracket 38 comprises

a generally hoizontally disposed portion **39** and an outstanding portion **40** having a kneebrace **38***a* angularly secured therebetween. The horizontal portion **39** thereof is rigidly secured to the base portion **18** of the mounting **13** axially outwardly therefrom by means of a fastener **41** and a slot, the latter being shown at **42**. The outstanding portion **40** of the bracket **38** defines at its free end a generally rearwardly opening spring catch, represented generally by the reference numeral **43**, and seen in detail in FIG. 6. The spring catch **43** comprises a generally U-shaped clip **44** and an integrally formed mounting plate **45** which is secured to the outstanding portion **40** of the bracket **38** by means of a pair of fasteners **46**.

The side **14** of the reel adjacent the bracket **38** defines a radially outwardly opening tow line receiving slot **47**. As seen particularly in FIG. 3, the slot **47** is equipped with a radially inwardly biased keeper element, represented generally by the reference numeral **48**, which is perimetrically mounted on said side **14** of the reel **11**. The keeper element **48** comprises a mounting plate **49** a keeper bar **50** and a biasing spring **51**. The keeper element **48** is disposed so that the radially inwardly acting force exerted on said keeper bar **50** by said spring **51** is sufficient to hold the tow rope **6** therein against the force exterted thereon because of the rotation of the reel **11** but is also small enough to permit easy release thereof by a slight force exerted upon the handle **10** of the tow rope **6** by the user thereof. The spring catch **43** is provided for the purpose of sufficiently securing the tow rope **6** while the greater intermediate portion thereof is being wound on the reel **11**.

Preferably, and as shown particularly in FIGS. 1 and 2, a rigid section, represented generally by the reference numeral **52** is interposed in the tow rope **11** in closely spaced relation to said one end **7** thereof. Since it is preferred that the tow rope **6** does not become twisted when it is releasably received within the spring catch **43** and thereafter wound on the reel **11**, as seen particularly in FIG. 2, the rigid section **52** preferably comprises a conventional snap swivel hook **53**. The intermediate shank portion **54** of the snap swivel hook **53** is adapted to be releasably received within the spring catch **43** of the bracket **38**. The tow rope **6** intermediate the snap swivel hook **53** interposed therein and the handle **10** thereof is adapted to be further releasably received within the slot **47** in the one side **14** of the reel **11** in such closely spaced relation to the snap swivel hook **53** that sufficient slack remains in the last mentioned space thereof to allow revolution of the reel **11**. For the purpose of convenience, the portion of the tow rope **6** intermediate the reception thereof in the slot **47** of the reel **11** and the handle defining end **9** thereof is herein termed the convolutionable portion thereof. It should be noted that the said one end **7** of the tow rope **6** is fitted with a float **55** for the purpose of keeping the tow rope **6** from becoming tangled in the motor B. From the foregoing it should be obvious that the reel **11** is adapted to wind up, keep and release the convolutionable portion of the tow rope **6** when the same is not in towing use.

Having specifically described my invention, the operative simplicity inherent in vindicating the purpose thereof should be briefly noted. When it is desired to wind up the tow line **6**, such as when the skier has fallen in the water or when it is desired to end participation in the sport, the snap swivel hook **53** is placed in the spring catch **43**. Then the keeper element **48** is raised and the tow line **6** is dropped in the slot **47** in the reel **11**, care being taken that sufficient slack is left therein between the reel **11** and the snap swivel hook **53**, and the convolutionable portion of the tow line **6** is thereafter wound upon the reel **11**. When it is desired to again use the tow line in towing a skier, the skier, not shown, holds the handle **10**, and as the boat A moves away from him the tow line **6** is easily stripped off the freely rotating reel **11** by the slightest force exterted thereon by the skier. When the tow rope **6** is unwound from the reel **11** the same is easily released from both the slot **47** in the reel **11** and the spring catch **43** of the bracket **38** by a slight force applied thereto by the skier. Thereafter the tow rope **6** is automatically dropped into the water behind the boat A without help from the operator of the boat, his attention being available for attending to the safe operation of the boat.

This invention has been thoroughly tested and found to be completely satisfactory for the accomplishment of the above objects; and while I have shown a preferred embodiment thereof, I wish it to be specifically understood that the same may be modified without departure from the scope and spirit of the appended claims.

What I claim is:

1. A water ski towing device for use in combination with a boat having a transom, said towing device comprising means on said transom for detachably securing a ski tow rope, a ski tow rope one end of which is secured to said means and the other of which is equipped with a handle, a tow rope keeping reel generally freely rotatably journalled within a pedestal mounting, said pedestal mounting including a base portion which is rigidly secured to the boat in the vicinity of the transom thereof, the axis of said reel being disposed generally transversely to the direction of travel of said boat, a spring catch-equipped bracket rigidly secured to said base portion of said pedestal mounting and disposed axially outwardly therefrom, the side of said reel adjacent said bracket defining a radially outwardly opening tow line receiving slot, a rigid section interposed in said tow rope in closely spaced relation to said one end thereof and adapted to be releasably received within the spring catch of said bracket, the portion of said tow rope intermediate the rigid section defined therein and said handle being adapted to be further releasably received within said slot in such closely spaced relation to said rigid section that sufficient slack remains in the last mentioned space thereof to allow revolution of said reel, the portion of said tow rope intermediate the said reception thereof in said slot and said handle comprising the convolutionable portion thereof, said reel being adapted to wind up, keep and release said convolutionable portion of said tow rope when the same is not in towing use.

2. The structure defined in claim 1 in which said rigid section of said tow rope comprises a snap swivel hook, and in which said spring catch-equipped bracket is generally L-shaped, one portion thereof being rigidly secured to said base portion of said pedestal mounting and the other outstanding portion thereof defining at its free end a generally rearwardly opening spring catch.

3. The structure defined in claim 1 in which said slot defining side of said reel is equipped with a radially inwardly spring biased keeper element which is perimetrically mounted on said side of said reel in association with the slot, the radially inwardly exerted biasing force on said keeper element being such as to hold said tow rope therein against the force exerted thereon because of the rotation of said reel but permitting easy release thereof by a slight force exerted upon said handle of said tow rope by the user thereof.

4. The structure defined in claim 3 in which said means on said transom includes a tow bar and said one end of said tow rope is secured to a pulley which is adapted to ride freely on said tow bar intermediate the ends thereof.

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