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SMALL BOAT MOORING DEVICE

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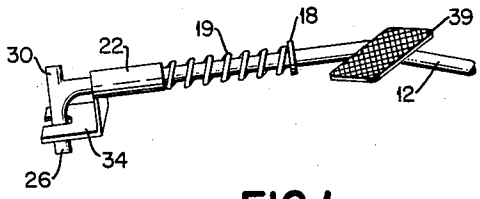
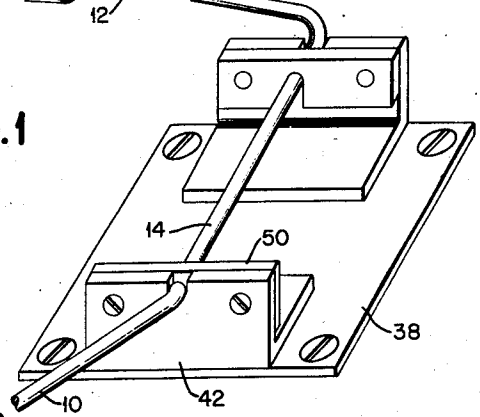
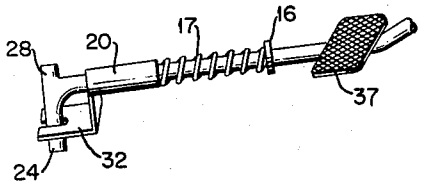


FIG.1





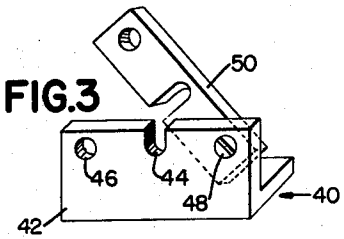
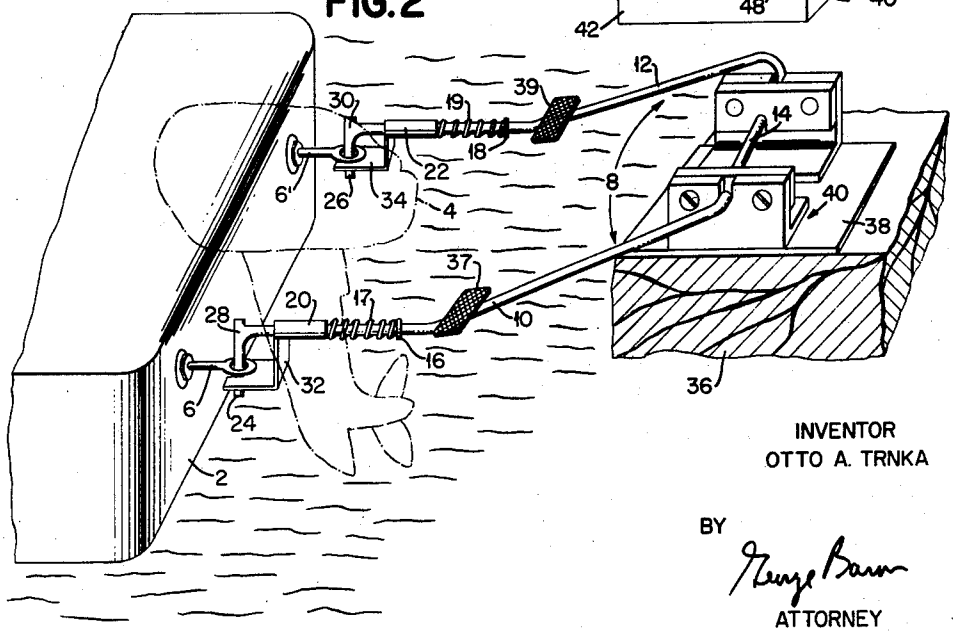


FIG.3

FIG.2



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SMALL BOAT MOORING DEVICE

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7 Claims. (Cl. 114—230)

This invention relates to readily connectible mooring devices for small vessels, particularly small boats of the class that will include power boats having inboard or outboard motors, row and sail boats, dinghies, and the like.

This invention is particularly applicable to those vessels which are moored to docks, for example, a landing platform of a yacht club, and such vessels lie in the water in close proximity to one another. The action of the wind, currents and waves will cause such small boats to be buffeted about causing adjacently moored vessels to scrape and collide against one another, contributing to the mutual damage of the colliding vessels. The present invention eliminates such collisions, scrapings, etc.

The present invention provides a boat tender that is adapted to moor a small boat by its stern, such tender being shaped so as to provide sufficient clearance for an outboard motor. The securing of a boat by its stern has many advantages. For example, most small boats are covered with a canvas in order to protect them from weathering. The act of covering with canvas begins at the bow and terminates at the stern. Thus with a tender that secures a small boat by its stern, one can immediately disembark from the boat after tying the canvas or similar covering to the boat. Whereas when a boat is secured to a shore installation at its bow, one has to walk the entire length of the boat on a very narrow ledge of the boat after such cover has been applied, in order to disembark. Another desirable feature accruing to the securing of a boat by its stern arises when the secured craft has an outboard motor attached thereto. The instant invention is designed to safeguard such outboard motor from collisions with other boats or with the dock, yet allow one to work on such motor close to the dock, permitting ready access to tools kept on the landing.

It is an object to provide a simple but effective device for securely mooring a small boat by its stern to a dock.

It is another object to provide a mooring device that will prevent substantial deflection of a small vessel because of wind, currents and waves.

It is yet another object to provide easy access to or exit from said small vessel as a consequence of such novel mooring means.

It is a further object to attain the aforementioned objects with a structure that is durable, relatively inexpensive to manufacture, and is provided with rapid connect and disconnect means, enabling one to quickly secure a boat to a dock or become disengaged from the dock.

Fig. 1 is a perspective view of the tender device, per se.

Fig. 2 is a perspective view of the tender mounted on a dock, the stern and associated gear of a small vessel being shown partly in phantom.

Fig. 3 is a detailed showing of latch plates used in carrying out the invention.

Referring to Fig. 2, there is shown the stern 2 of a small vessel, such stern 2 being equipped with a conventional outboard motor 4 that juts out from the stern of the small vessel. Inserted in the rear of the vessel on both sides of the motor are eye-bolts 6 and 6'. The tender comprises a bifurcated element or bar 8 comprising solid steel arms 10 and 12 joined together by a horizontal cross-piece 14. Shoulders 16 and 18 are welded to each arm 10 and 12 part way along such arms so as to provide surfaces against which one end of springs 17 and 19 may be urged. The respective other ends of springs 17 and 19 are urged against latches 20 and 22, such latches being movable along as well as rotatable about their respective arms 10 and 12. Each arm 10 or 12 terminates in a pin 24 or 26, wherein each pin extends beyond its junction with its respective arm to form a lug 28 or 30. Each latch 20 or 22 terminates in a U-shaped lock 32 or 34 which maintains its corresponding pin 24 or 26 locked to an eye-bolt 6 or 6' after the former is inserted into the latter. The entire tender is secured to a dock 36 or similar structure by means of a solid steel base 38. The bifurcated bar 8 is inserted in an angle iron 40 welded to the base 38. Plates 37 and 39 are welded to arms 10 and 12 in the vicinity above shoulders 16 and 18. Such plates 37 and 39 are wide enough to provide a step on which one may place his foot upon leaving or entering the boat that is moored by the tender.

It is noted, as best seen in Fig. 3, that the angle iron 40 will comprise one section 42 having an opening 44 for accommodating the horizontal cross-piece 14 and two openings 46 and 48 for accommodating bolts. The second section 50 of angle iron 40 is suitably attached to the first section 42 so as to lock the bifurcated bar 8. When it is desired to remove the tender for winter storage, the top section 50 is unbolted from the first section 42, the tender is removed, and the top section 50 may or may not be reattached to the first section 42.

The operation of the tender will now be described. When it is desired to moor a small craft, the craft is guided slowly backward and halted within the vicinity of the tender. The latch 20 is pushed rearwardly against the spring 17 and is also rotated about 180° around its horizontal axis, and then released. The spring 17 urges the latch against lug 28, maintaining the latch in that position so that U-shaped lock 32 is kept free of pin 24. The pin 24 is inserted in eye-bolt 6. The latch 20 is rotated another 180° and then released, permitting the pin 24 to be locked to bolt 6 in a fast snap-on action. In a similar manner, the second pin 26 is secured to the other eye-bolt 6' on the stern of the boat.

It is to be understood that arms 10 and 12 may have bends in them to conform to the shape of the outboard motor or because of the relationship of the dock to the small vessel. If it is desired, the entire tender may be raised to an out-of-use position so that it is vertically disposed at right angles to the dock, permitting a boat or similar vessel to be docked broadside. Where no tides are present, such as in inland lakes, the tender need not be secured to a floating dock. The arms of the tender are rigid enough to support the weight of a person entering or leaving a vessel, yet one may bend the arms 10 and 12 closer together or further apart in accordance with the location of an outboard motor or eye-bolts on the stern of such small boat. It is further understood that one may use variations in the type of locking means for securing the pins 24 and 26 to their respective eye-bolts 6 and 6' without departing from the spirit of the invention.

From the foregoing description it will be seen that the improved mooring device is of simple yet rigid and economical manufacture that permits a very quick connect-disconnect tender for the sterns of small boats.

What is claimed is:

1. A device for mooring a small boat, by its stern, to a boat landing structure comprising a support adapted to be mounted on said structure, a bifurcated element removably and pivotally mounted at its junction on said support, said bifurcated element having rapid connect-disconnect means at each of its ends, said rapid connect-disconnect means being adapted to be secured to the stern of such small boat.

2. A device for mooring a small boat, by its stern, to a landing structure as described in claim 1 wherein said bifurcated element diverges as one goes from its junction towards its ends.

3. A device for restraining a small boat moored, by its stern, to a boat landing structure comprising a support adapted to be mounted on said structure, a bifurcated element removably and pivotally mounted at its junction on said support, said bifurcated element comprising two arms that diverge outwardly from their junction, each arm having a springed latching means thereon, a pin at the end of each arm and at right angles thereto, said springed latching means being rotatable with respect to said arm and urgeable away from said pin, the normal state of said springed latching means is such as to urge said latching means toward said pin.

4. A restraining device as defined in claim 3 wherein a plate is secured upon each arm and such plate is adapted to provide a step on which one may stand during entering and leaving said small boat.

5. A device for restraining a small boat having eye-bolts or the like in its stern and moored to a boat landing structure comprising a support adapted to be mounted on said structure, a bifurcated element removably and pivotally mounted at its junction on said support, said bifurcated element comprising two rigid arms that diverge outwardly from their junction, each arm having a springed latching means thereon, a pin at the end of each arm and at right angles thereto and adapted to fit into such eye-bolts or the like, said latching means being rotatable with respect to said arm and urgeable away from said pin so as to permit ready access of said pin to its respective eye-bolt whereby release of said latching means will cause said pin to be locked in its respective eye-bolt.

6. A restraining device as defined in claim 4 wherein said pin is provided with a lug for preventing said pin from swiveling in its respective eye-bolt.

7. A device for restraining a small boat moored, by its stern, to a boat landing structure comprising a support adapted to be mounted on said structure, a bifurcated element removably and pivotally mounted at its junction on said support, said bifurcated element comprising two rigid yet bendable arms that diverge outwardly from their junction, each arm having a springed latching means thereon, a pin at the end of each arm and at right angles thereto, said pin protruding beyond the top and bottom surfaces of said arm, said latching means being rotatable with respect to said arm and urgeable away from said pin, the normal state of said springed latching means being such as to urge said latching means against said pin in locking relationship therewith.

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