United States Patent [19]

Farmer

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[54] **TRANSDUCER BRACKET**

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[52] **U.S. Cl.** ..... **115/18 E**; 248/229; 340/8 S

[51] **Int. Cl.** **B63h 21/26**

[58] **Field of Search** ..... 115/18 E, 18 A; 248/229, 248/231, 316 D; 204/196, 197; 181/.5 VM, .5 A; 43/17.1, 4; 340/8 S

[56] **References Cited**

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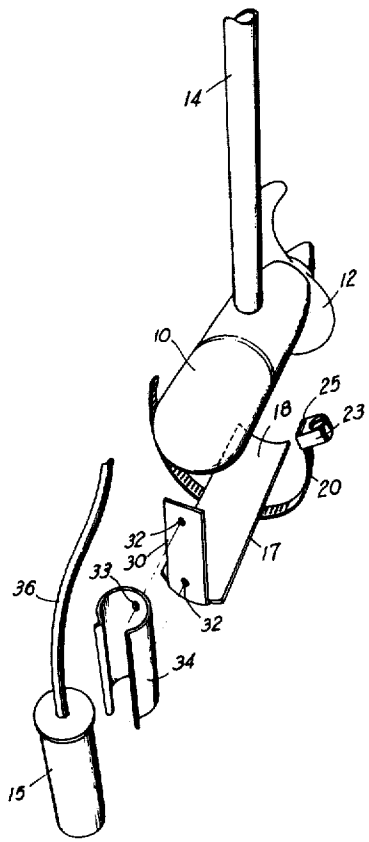
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Attorney, Agent, or Firm—Newton, Hopkins & Ormsby

[57] **ABSTRACT**

A bracket assembly is disclosed for mounting a transducer to a boat. The assembly comprises an adjustable band adapted to be secured about a motor casing, a support member is secured to the band, and the transducer is releasably mounted to the support member.

1 Claim, 3 Drawing Figures



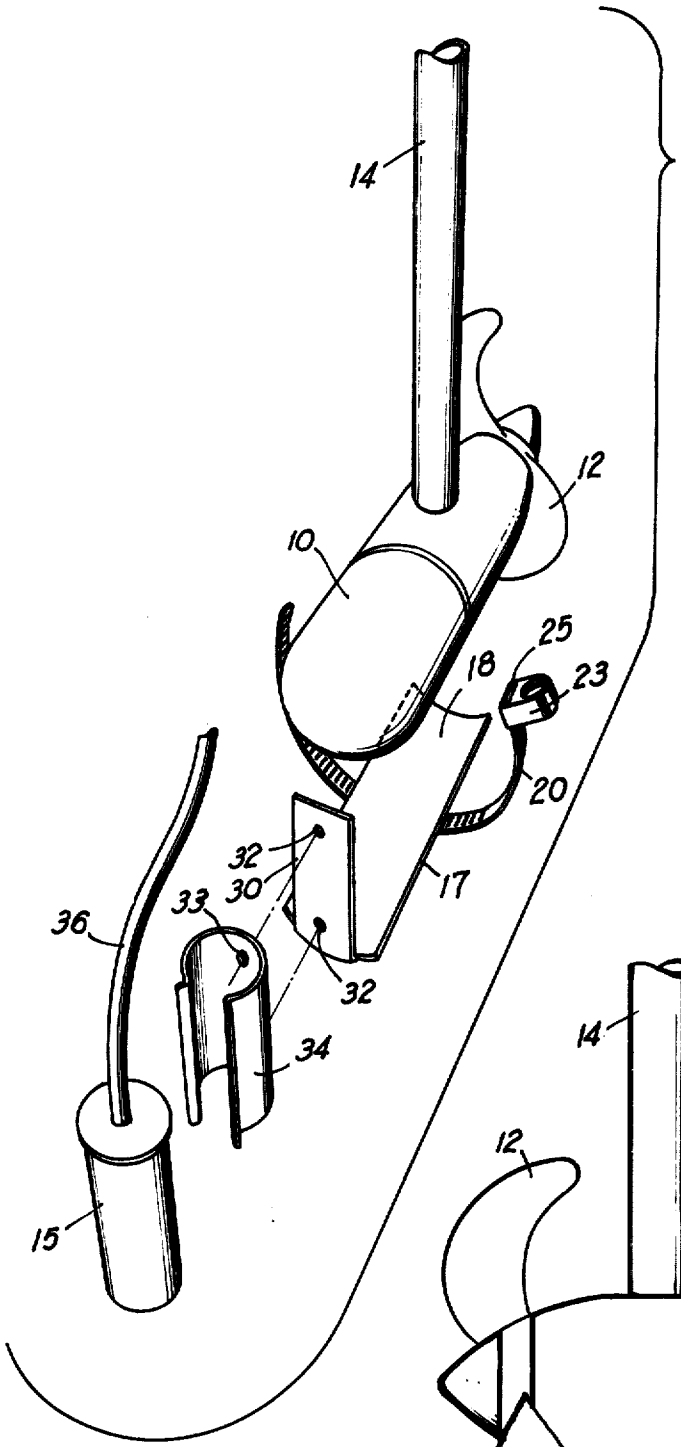


FIG 1

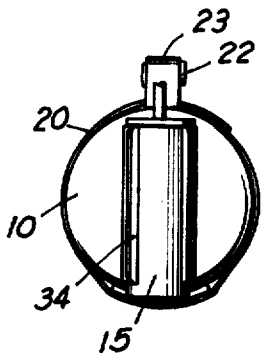


FIG 2

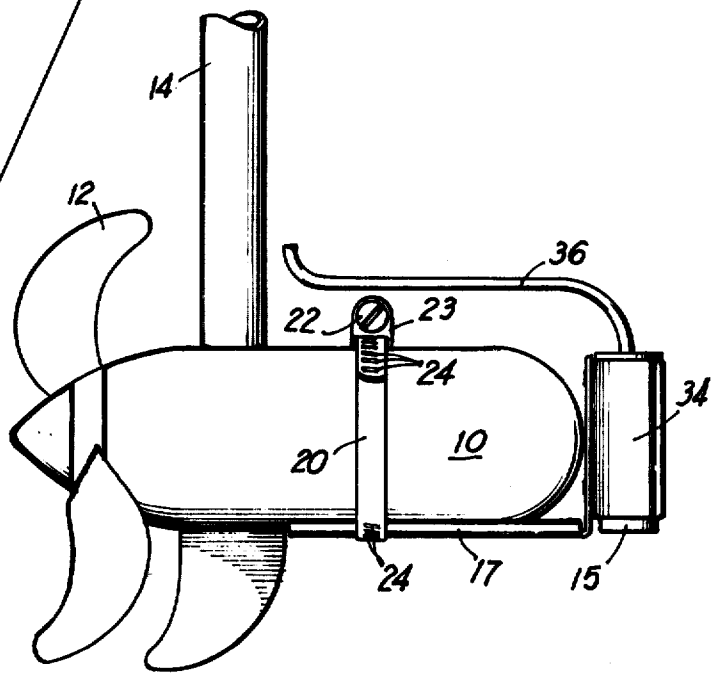


FIG 3

TRANSDUCER BRACKET

BACKGROUND OF THE INVENTION

This invention relates to bracket assemblies for mounting transducers to boats.

Heretofore, transducers of the type used in measuring the depth of water and in recognizing the presence of fish beneath boats, have been mounted to the stern of such vessels by means of bracket assemblies secured to transoms. Such assemblies are exemplified by those disclosed in U.S. Pat. Nos. 3,729,162 and 3,752,431.

Though boat transoms provide good structural support members to which transducer brackets may be secured, the location of transducers at the stern of boats has proven cumbersome and ineffective for many applications. For example, the usual, operative location for a trolling motor is at the bow of a fishing boat. The stern normally supports the relatively high-powered motor used in propelling the boat to and from trolling areas. When trolling, fishermen usually seat themselves at the bow of the boat to manipulate the trolling motor tiller. With the transducer located at the stern a depth or presence of fish detected by the transducer is offset almost the full length of the boat from the location of the fisherman himself and the trolling motor. This offset renders it difficult to accurately position the boat once the boat has been navigated over the area previously detected by the transducer. Furthermore, there is no practical way of confirming arrival at the desired location for once there the transducer is relocated in a new area. Stern mounting also necessitates the availability of electrical energy at both ends of the boat to simultaneously power both the trolling motor and transducer. Stern mounting further necessitates the need for three individual boat mountings for underwater boat accessories.

Accordingly, it is a general object of the present invention to provide improved means for mounting transducers to boats.

More specifically, it is an object of the invention to provide means for mounting transducers closely adjacent trolling motors secured to boats.

Another object of the invention is to provide means for mounting transducers to boats with facility and speed.

Another object of the invention is to provide means for mounting transducers to boats at a location adjacent the usual place at which trolling motors are controlled.

Yet another object of the invention is to provide means for mounting transducers to boats at locations where electrical wiring of trolling motors and transducers may run coextensively to a battery for wiring compactness.

Another object of the invention is to provide means for mounting transducers to boats whereby transducers and trolling motors may be simultaneously mounted, dismounted, submerged and emerged.

SUMMARY OF THE INVENTION

In one form of the invention a bracket assembly is provided for mounting a transducer to a boat. The bracket assembly comprises an adjustable band adapted to be secured about a motor casing, a support member secured to the band, and transducer gripping means mounted to the support member.

In another form of the invention transducer mounting means are provided comprising a trolling motor having a motor casing, transducer gripping means, and means for mounting the transducer gripping means to the trolling motor casing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. **1** is an exploded view in perspective view of a transducer bracket assembly embodying principles of the invention.

FIG. **2** is a front view in elevation of the transducer bracket illustrated in FIG. **1**, shown mounted to the casing of the trolling motor and supporting a transducer.

FIG. **3** is a side view in elevation of the assembly shown in FIG. **2**.

DETAILED DESCRIPTION OF THE DRAWING

Referring now in more detail to the drawing there is shown a trolling motor having a motor casing **10** and a propeller **12** rotatably mounted adjacent the rear end of the trolling motor. A motor directional orientation and height adjusting shaft **14** extends upwardly from the motor casing. Shaft **14** is adapted to be mounted atop the bow of a fishing boat by conventional mounting means whereby upon manual movement of a tiller coupled thereto the shaft may be swiveled to reorient the motor for steerage and also for pivoting the shaft about a fulcrum point to raise and lower the motor.

A bracket assembly is also shown for supporting a transducer **15** in front of motor casing **10**. The transducer is a conventional sound wave generator and receiver which emits a sound wave downwardly from the boat towards the floor of the body of water upon which the boat is floated. The bracket assembly is seen to include a support member **17** having a concave surface **18** detailed to fit snugly against the bottom convex surface of motor casing **10**. The assembly includes an adjustable metal band **20** secured to support member **17**. The metal band is of sufficient length to encompass the outer periphery of casing **10** and be rigidly secured thereto by means of a screw **22** threaded through a screw head **23** rigidly secured to one end of band **20**. In threading screw **22** through screw head **23** the threads of the screw may engage ridges **24** adjacent the other end of the band which is inserted through a slot **25** in the screw head and thereby effect a tightening or loosening of the band about the motor casing by driving ridges **24**.

At an end of the concave surface portion of support member **17** extends upwardly a plate **30** formed integrally with support member **17**. With this construction the support member itself may be considered as including two unitary legs extending at right angles to one another. The plate member **30** is itself seen to include two holes **32** which are in alignment with holes **33** in a resilient metal clip **34**. Holes **32** and **33** are adapted to receive fastening means to secure the clip to the plate member.

In FIG. **3** the assembly is shown with transducer **15** mounted just to the front of motor casing **10**. With this mounting sound waves may be emitted and received from the bottom of the transducer without interference with structural components of the trolling motor itself. A co-axial cable **36** extends upwardly from the transducer, over the top of the motor casing and then upwardly out of the water along shaft **14**.

It thus is seen that a transducer bracket is provided to which a transducer may be readily and easily mounted to a boat. The bracket itself is of simple and economic construction. It provides rigid attachment of a transducer to a boat in a position immediately to the front of the trolling motor thereby creating minimal drag. With this mounting to the trolling motor itself the transducer and trolling motor assembly may be both mounted to the boat and raised and lowered from the water as a unified assembly. This unification of assembly thus minimizes the time and effort required in setup operations. The fact that the transducer and trolling motor power lines may be juxtaposed also minimizes the amount of wiring required to couple the units to a source of power such as a marine battery. Where such a battery is housed in the bow of the boat there is no need for cabling to run the entire length thereof.

It should also be noted that the mounting of the transducer to the front of the motor casing enables the trolling motor to be raised to some degree, such as in trolling in very shallow water, without the attendant danger of raising the transducer itself out of the water. The fact that the bottom of the transducer is not directed towards structural elements of the boat or its trolling motor or power motor avoids the creation of boat associated echoes from being detected by the transducer. That the transducer is mounted to the trolling motor also eliminates the presence of substantial offset between the sonar presentation area and the observer who typically is himself controlling the trolling motor by manual manipulation of a tiller coupled thereto.

It should, of course, be understood that the just-described embodiment merely illustrates principles of the invention in one preferred form. Many modifications may, of course, be made thereto without departure from the spirit and scope of the invention as set forth in the following claims.

What is claimed is:

1. A bracket assembly for mounting a transducer to a boat comprising an adjustable band adapted to be secured about a motor casing, a support member secured to said band, and transducer gripping means mounted to said support member, wherein said support member includes a concave surface detailed to be held in snug abutment about a convex surface of a motor casing and wherein said support member comprises two legs joined together in L-shaped configuration whereby one of said legs may be secured in abutment with a bottom surface of a motor casing and the other of said legs may be secured in abutment with a front portion of the motor casing.

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