MOTOR MOUNTING STRUCTURE

Inventors: Garrett H. Harris, Jackson; Edward A. Dutt; Billy J. Savage, both of Starkville, all of Miss.

Assignee: The Herschede Hall Clock Company, Starkville, Miss.; by said Dutt and Savage

Filed: Apr. 23, 1971

Appl. No.: 136,755

U.S. Cl. ........................................... 248/4, 115/17
Int. Cl. ......................................... F16M 1/02
Field of Search .... 248/4, 284, 286, 278; 115/17, 115/18

References Cited

UNITED STATES PATENTS

2,138,600 11/1938 Harmon ........................................ 248/4
2,905,132 9/1959 Lewis et al. .......................... 115/17 X
3,604,674 9/1971 Wilkerson ................................ 248/4
1,466,746 9/1923 Ohlen .................................. 248/284 X
3,245,640 4/1966 lbb's .................................. 248/4

3,674,228 7/1972 Horton ........................................ 248/4

FOREIGN PATENTS OR APPLICATIONS

279,669 11/1927 Great Britain .............................. 248/4

Primary Examiner—J. Franklin Foss
Attorney—Pearce & Schaeperklaus

ABSTRACT

A motor mounting structure for supporting an outboard motor on a boat which includes a bracket mounted on the boat, a link pivotally mounted on the bracket and a clamp pivotally mounted between flanges at a free end of the link. The clamp engages and supports a housing of the motor. The flanges are drawn together to grip the clamp and hold the clamp in selected angular positions. The link swings through an arc of approximately 180 degrees between an operative position for supporting the motor in upright position outboard of the boat and a retracted position for supporting the motor in substantially horizontal position inboard of the boat.

5 Claims, 10 Drawing Figures
MOTOR MOUNTING STRUCTURE

This invention relates to outboard motors for boats. More particularly, this invention relates to a retractable support structure for an outboard motor.

An object of this invention is to provide a mounting structure for a lightweight weight motor which permits ready raising of the motor from the water to swing the motor into the boat when not in use.

Briefly, this invention provides a motor mounting structure which includes a bracket which can be mounted on a deck of a boat adjacent an edge thereof, a link pivotally mounted at one end thereof on the bracket, and a motor support pivotally mounted at the other end of the link. The link swings between an outwardly extending position in which the motor is supported in operative position and an inwardly extending position where the motor can be supported inside the boat. As the motor swings inwardly with the link, the motor can swing with respect to the link to a position parallel to the deck. A slide lock mounted on the link can engage the bracket to hold the link in both positions. A lock operating cord extends from the lock along the link and can be operated by a person in the boat in both positions of the link.

The above and other objects and features of the invention will be apparent to those skilled in the art to which this invention pertains from the following detailed description and the drawings, in which:

FIG. 1 is a view partly in side elevation and partly in section showing a boat equipped with a motor mounting assembly constructed in accordance with an embodiment of this invention, a motor supported thereby being shown in operative position;

FIG. 2 is a view partly in side elevation and partly in section showing the boat illustrated in FIG. 1 with the motor and motor mounting assembly in retracted position;

FIG. 3 is a view in section taken on the line 3—3 in FIG. 2, parts being broken away to reveal details of structure;

FIG. 4 is a view in section taken on an enlarged scale on the line 4—4 in FIG. 3;

FIG. 5 is a view in section taken on the line 5—5 in FIG. 3;

FIG. 6 is a view in section taken on the line 6—6 in FIG. 3;

FIG. 7 is a fragmentary perspective view of a portion of a bracket and of a link which form a part of the motor supporting assembly;

FIG. 8 is a fragmentary view in lengthwise section of a portion of the link showing a motor clamp and pivot members associated therewith, a portion of a motor housing being shown in double dot-dash lines;

FIG. 9 is a plan view showing the motor mounting assembly in retracted position looking in the direction of the arrows 9—9 in FIG. 2, parts being broken away to reveal details of construction; and

FIG. 10 is a view in section taken on the line 10—10 in FIG. 9.

In the following detailed description and the drawings, like reference characters indicate like parts.

In FIG. 1 is shown a bow portion of a boat 20 which includes a deck 22 adjacent a bow 23 thereof. A motor mounting bracket 24 is mounted on the deck 22. Upwardly extending flanges 26 and 27 (FIG. 3) of the bracket 24 support a pivot pin 28 on which one end of a link member 29 is pivotally supported. A removable pivot pin 31 is carried by spaced flanges 32 and 33 (FIG. 10) which are carried by the opposite end portion of the link member 29 (FIG. 9). The pin 31 extends through a transverse bore 331 (FIG. 10) in a split sleeve clamp 34, and the clamp 34 is pivotally mounted on the pivot pin 31. A spring press detent 341 in the pin 31 holds the pin 31 in position. A ring 342 mounted on the pin 31 carries a chain 343, which is attached to the link member 29 by a fastener 344 to prevent loss of the pin 31. The clamp 34 is constructed to receive and grip an upright housing 36 which is a part of an outboard motor 37 (FIG. 1). The motor 37 can be of the type which is electrically driven and is sometimes called a trolling motor. Power is supplied to the motor to drive a propeller 38 by a power cable 39, only a portion of which is shown, which can be connected to an appropriate battery and controls (not shown). A screw fastener 41 extends through arcuate slots 42 and 43 (FIG. 10) in the flanges 32 and 33, respectively, and through bores 44 and 46 in lugs 47 and 48 mounted on the split ring clamp 34 on opposite sides of a slot 49 therein. A nut 51 threaded on the screw fastener 41 can be turned to draw flanges 32 and 33 toward each other to grip the sides of the split sleeve clamp 34 and to cause the clamp 34 to grip the housing 36. A handle 52 is pivotally mounted on the nut 51 and can be used for turning the nut 51.

When the pivot pin 31 is removed form the bore 331 and the screw fastener 41 is removed from the bores 44 and 46, the split sleeve clamp 34 and the motor 37 can be removed from the link member 29. However, during usual operation, the pivot pin 31 remains in the bore 331 and the screw fastener 41 remains in the bores 44 and 46 as shown in the drawings.

A T-shaped locking member 53 (FIG. 3) is mounted for sliding lengthwise of the link member 29. A stem portion 54 of the locking member 53 is received in a guide slot 56 between bosses 57 and 58 in the body of the link member 29. A cover plate 59 attached to the body of the link member 29 by screw fasteners 61 holds the locking member 53 in position for sliding movement. A compression spring 62 mounted on the shank of an eyebolt 63, which is mounted on the stem portion 54 of the locking member 53, bears on a washer 64 which engages bosses 66 and 67 of the link member 29 and on an adjustable nut 69 threaded on the eyebolt 63 to urge the locking member 53 to the left as shown in FIG. 3 so that locking pins 71 and 72 at opposite ends of the cross bar of the locking member 53 can be received in inboard slots 73 and 74 in the flanges 26 and 27, respectively, of the bracket 24 when the link member 29 is in the inboard or retracted position shown in FIGS. 2 and 3 and the locking pins 71 and 72 are received in outboard slots 76 and 77 (FIG. 3) in the flanges 26 and 27, respectively, when the link member 29 is in the operative position shown in FIG. 1. A loop portion 78 (FIG. 3) at an outer end of the eyebolt receives a cord 79 which is attached to the loop portion 78 and extends along the link member 29 and around a rounded end portion 81 (FIG. 8) of the link member 29 so that, when the motor 37 and the link member 29 are in operative position, an operator inside the boat can pull a handle 83 (FIG. 1) at a free end of the cord 79 to
release the locking pins 71 and 72 to permit swinging of the motor 37 and the link member 29 into a position in which the motor 37 is inside the boat. The nut 51 is loosened by turning the handle 52 to permit swinging of the motor 37 to the retracted position shown in FIG. 2. When the motor is in this position, a resilient bumper 86 of rubber or the like mounted on the link member 29 can rest on an appropriate edge molding or the like of the deck 22. The cord 79 serves not only for releasing the locking pins 71 and 72 but also can be used for pulling the link member 29 and the motor 37 as they swing from operative position to retracted position.

As shown in the drawing, the link swings through an arc of approximately 180 degrees as the link swings between operative and retracted positions. The slots 42 and 43 limit the swinging of the motor housing 36 and the split sleeve clamp 34 to an angle of approximately 90° with respect to the flanges 32 and 33 and the link member 29.

The motor mounting structure described above and illustrated in the drawings is subject to structural modification without departing from the spirit and scope of the appended claims.

What is claimed is:

1. A motor mounting structure for supporting an outboard motor on a boat which comprises a bracket for mounting on the boat, a link pivotally mounted on the bracket at one end of the link, a pair of spaced flanges carried on the link at an opposite end thereof, a clamp pivotally mounted between the flanges, the clamp being arranged to engage and support a housing of the motor, means for drawing the flanges together to grip the clamp and hold the clamp in selected angular positions, the link being swingable through an arc of approximately 180 degrees between an operative position for supporting the motor in upright position outboard of the boat and a retracted position for supporting the motor in substantially horizontal position inboard of the boat and means cooperating with and lockingly securing the link in operative position.

2. A motor mounting structure as in claim 1 wherein said means for lockingly securing the link includes a locking member mounted on and slideable lengthwise of the link, the locking member being engageable with the bracket to lock the link in operative position, and a cord is attached to the locking member and extends outwardly of the link along an underside of the link when the link is in operative position and along an opposed outwardly facing surface carried by the link and along the upper side of the link when the link is in operative position, the cord being pullable to cause release of the locking member from the bracket and for lifting the link and the motor to swing the link and the motor to retracted position.

3. A motor mounting structure as in claim 2 wherein there is means for resiliently urging the locking member toward the bracket to resiliently hold the locking member in locked position.

4. A motor mounting structure as in claim 1 wherein there is provision for limiting swinging of the clamp to approximately 90° with respect to the flanges of the link.

5. A motor mounting structure as in claim 1 wherein the clamp is a split sleeve clamp and the clamp is caused to grip the housing when the flanges grip the clamp.

* * * * *