Feb. 7, 1956 J. C. MUTTY 2,733,589

LOCKING DEVICE FOR OUTBOARD MOTORS

Filed Oct. 7, 1954

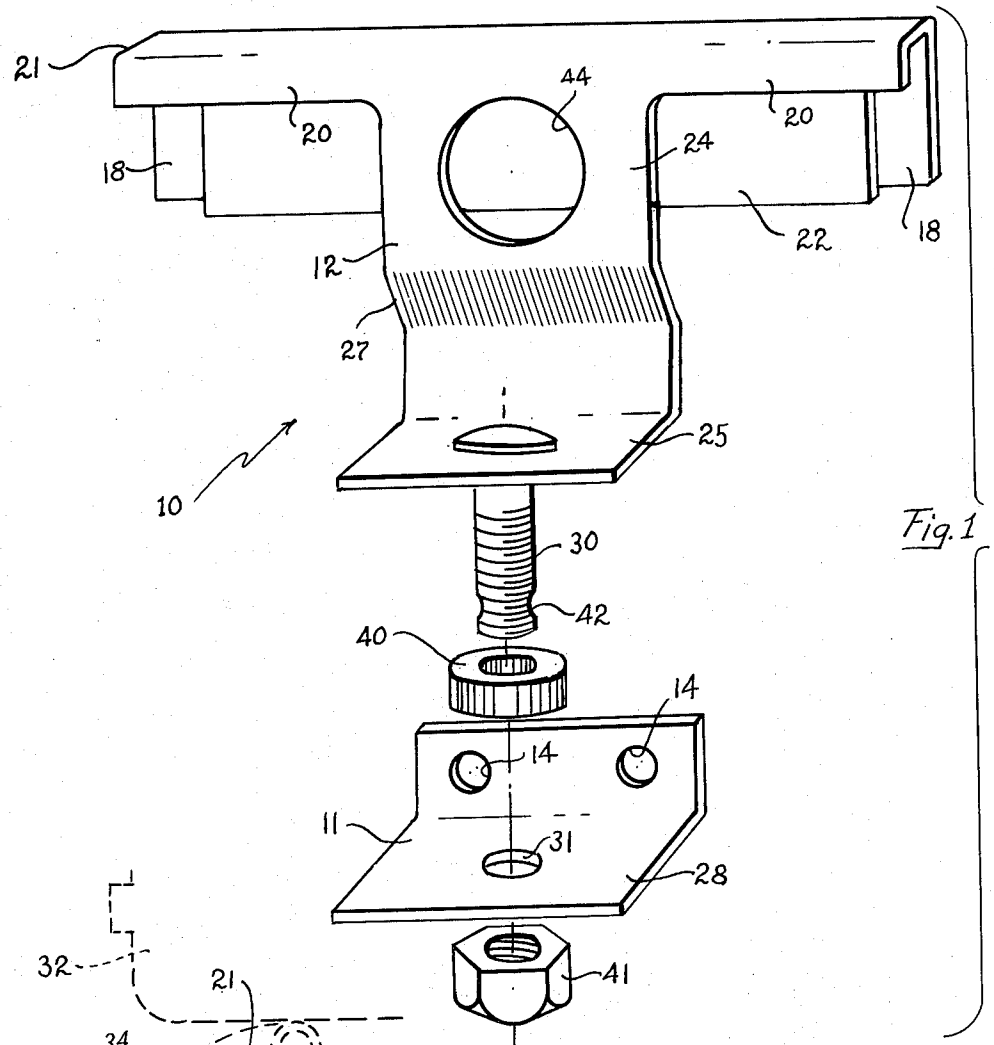


Fig. 1

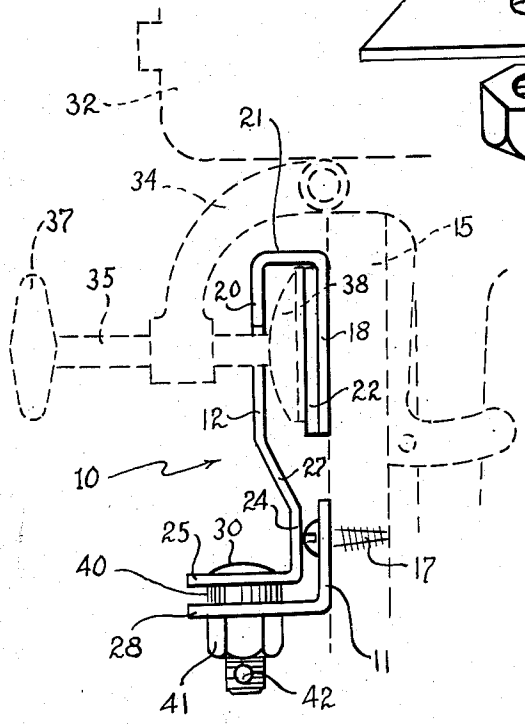


Fig. 2

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United States Patent Office 2,733,589 Patented Feb. 7, 1956

2,733,589

LOCKING DEVICE FOR OUTBOARD MOTORS

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Application October 7, 1954, Serial No. 460,924

5 Claims. (Cl. 70—58)

This invention relates to locking devices for outboard motors, and has particular reference to an improved locking or securing device adapted to coact with the clamping mechanism of a motor when the latter is attached to a boat to prevent loss of the motor overboard in the event that the clamping mechanism becomes loosened, and also to prevent theft or unauthorized removal of the motor from the boat.

It is well known among fishermen and boating enthusiasts that the usual clamping mechanism which is provided on an outboard motor to secure it to a boat frequently becomes loosened during operation of the motor due to vibration. If the motor clamps become sufficiently loose, there is of course the danger of losing the motor overboard and in such event it is rarely retrieved, or if retrieved is usually in inoperative condition. Accordingly, various devices have been developed heretofore to prevent the loss of the motor due to a loosened clamping mechanism, and also to prevent theft of the motor from the boat. Most of these devices, however, are cumbersome or overly complicated, and none, in so far as is known, are adapted for use with both single clamp and double clamp motors.

The present invention, therefore, contemplates as its primary object the provision of a compact, simply constructed locking or securing device adapted to coact with the clamping mechanism of an outboard motor to prevent the loss thereof in the event that the clamping mechanism becomes loosened during operation.

Another important object of the invention is to provide an improved locking or securing device for an outboard motor which may be effectively employed with either a single clamp or double clamp type of motor clamping mechanism.

A further important object of the invention is to provide an improved locking device for an outboard motor which is strong and durable, and yet is relatively inexpensive to construct.

A more specific object of the invention is to provide a locking device for an outboard motor which is adopted to coact with a padlock or the like to prevent theft or unauthorized removal of the motor from the boat.

Another specific object of the invention is to provide a locking device for an outboard motor having vibration dampening means to minimize the transmission of motor vibration and noise to the boat.

Other objects and advantages of the invention will become apparent from the following detailed description read in conjunction with the accompanying drawings wherein like reference numbers designate corresponding parts in all the views.

In the drawings:

Figure 1 is an exploded perspective view of an outboard motor locking device embodying the invention; and

Figure 2 is a side elevation of the locking device of Figure 1 in assembled, operative form.

Having reference now to the drawings, which illustrate a typical embodiment of the invention for the purpose of disclosure, **10** generally indicates the complete assembly of the locking or securing device, which assembly is essentially comprised of a bracket **11** adapted to be fixedly secured to the stern or transom of a boat, and a retaining member **12** adapted to coact with said bracket and the clamping mechanism of an outboard motor. Bracket **11** is in the form of an angle iron having holes **14** in one side thereof by which the bracket may be permanently secured to the inner side of the transom **15** of the boat as by screws **17**, bolts, or the like.

Retaining member **12** is preferably formed of a single piece of sheet metal and comprises an inverted channel and an angle element depending from one side of the channel. The former includes channel sides **18** and **20** joined together by the bottom **21**, the side **18** being of substantially greater width than the side **20**, as shown. Secured to the inner surface of the channel side **18**, for a purpose to be presently explained, is a strip of resilient material **22** such as neoprene or rubber.

The angle element, the width of which is approximately equal to one-third the length of the channel, depends from the mid-portion of the narrower channel side **20** and includes a substantially vertical leg **24** and a horizontal leg **25** projecting outwardly therefrom. Vertical leg **24** is slightly offset inwardly as indicated at **27** so that horizontal leg **25** will be in alignment with the outwardly projecting side **28** of bracket **11**, Figure 2, when the device is assembled. A bolt **30** projects through a hole in the leg **25** and is fixedly secured thereto as by tack welding. The shank of this bolt is adapted to pass through a hole **31** in the bracket side **28** to enable the retaining member to be detachably secured to the bracket.

An outboard motor **32**, as partially shown in phantom lines in Figure 2, is usually provided with a clamping mechanism having either a single, centrally disposed clamp or a pair of spaced apart clamps, and these clamps function in substantially the same manner as an ordinary C-clamp. Each such clamp normally includes a suitable supporting arm **34** which carries the clamping screw **35** having a handle **37** at its outer end and a clamping pad **38** its inner end.

When the locking device of the invention is used with a clamping mechanism having a pair of spaced clamps, the motor is lowered onto the transom of the boat, into the position shown in Figure 2, and before the clamps are tightened the retaining member **12** is dropped down over the clamping pads **38** so that the angle element **24**, **25** extends therebetween and the faces of the pads confront the resilient strip **22** on the inner surface of the channel side **18**. In this position, bolt **30** will extend through washer **40** and hole **31** in the bracket **11**. Thereafter, the clamps are tightened in the usual manner which brings the clamping pads into tight engagement with the strip **22** and channel side **18** and clamps the latter against the transom of the boat as well as clamping the motor in operating position. Nut **41** is then threaded onto bolt **30**, as shown, to secure the retaining member to the bracket.

With the foregoing arrangement, the motor can not be lost overboard even though the clamps become loosened since the channel bottom **21** and side **20** overlie the upper portion of the clamping pads **38**. Furthermore, any tendency of the motor to "drift" or shift sidewise on the transom is prevented by the angle element **24**, **25** extending between the clamps. The lower part of the shank of bolt **30** is formed with a bore **42** so that the bow of a padlock may be passed therethrough to prevent unauthorized disengagement of the locking device, and since the vertical leg **24** of the angle element overlies bracket screws **17** such can be accomplished only by breaking the bracket or retaining member. The resilient strip **22**, against which the clamping pads engage,

serves to minimize the transmission of motor vibration and noise to the boat, and the washer 40 is preferably of similar resilient material for the same purpose. If desired, a second resilient strip (not shown) can also be attached to the outer surface of channel side 18 as a further vibration dampener and as a protective pad for the finish on the transom.

When the locking device is used with a clamping mechanism having a single, centrally disposed clamp, the clamping pad thereof will first be passed through the aperture 44 in the vertical leg 24 of the retaining member 12, and the motor and engaged member positioned on the transom as previously described. Thereafter, the clamp may be tightened and the retaining member secured to the bracket 11 in the same manner as with a clamping mechanism having a pair of clamps. In the case of a single clamp, sidewise movement of the motor on the transom will be prevented by the confines of aperture 44, and loss overboard will of course be prevented by the overlying channel bottom 21 and side 20.

From the foregoing description it will be apparent that the invention provides a highly practical locking device for an outboard motor which is not only adapted for use with any type of motor clamping mechanism but is simple to operate and inexpensive to manufacture. The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The embodiment disclosed is therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims.

What I claim is:

1. A locking device for the clamps of an outboard motor comprising a bracket adapted to be rigidly secured to the transom of a boat, a retaining member having a channel adjacent its upper end one side of which is adapted to be engaged by the clamping pads of the motor clamps and the bottom and other side of which is adapted to overlie said pads when so engaged, and means adjacent the lower end of said member to detachably secure it to said bracket.

2. A device as defined in claim 1 including a strip of resilient material fixed to the clamping pad engaging side of said channel.

3. In a locking device for the clamps of an outboard motor: a bracket in the form of an angle iron one side of which is rigidly secured to the transom of a boat and the other side of which projects approximately perpendicularly from the transom; a retaining member comprising an inverted channel having one side of substantially greater width than the other side, the wider side of said channel being adapted to abut the transom along its outer surface and to be engaged by the clamping pads of the motor clamps along its inner surface, the bottom and narrower side of said channel being adapted to overlie the upper portion of said clamping pads when the latter are so engaged, and an angle element depending from the central portion of the narrower side of said channel; and means to detachably secure said angle element to the projecting side of said bracket.

4. A device as defined in claim 3 wherein said angle element includes a substantially vertical leg having an aperture therein through which a clamping pad may be passed to engage the wider side of said channel.

5. In a locking device for the clamping mechanism of an outboard motor: a bracket in the form of an angle iron having a side adapted to be rigidly secured to the transom of a boat and a side adapted to project outwardly therefrom; a retaining member adapted to coact with said bracket comprising an inverted channel having one side of substantially greater width than its other side, a strip of resilient material fixed to the inner surface of the wider channel side, an angle element having a width measurement substantially less than the length measurement of said channel depending from the central portion of the narrower channel side, said angle element including a substantially vertical leg having an aperture therethrough opposite said resilient strip and a substantially horizontal leg projecting from said vertical leg, said resilient strip being adapted to be engaged by a motor clamping pad passed through said aperture or on either side of said vertical leg; and means to detachably secure said retaining member to said bracket including a bolt member depending from the horizontal leg of said angle element and an aperture in the outwardly projecting side of said bracket to receive said bolt member.

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