United States Patent [19]

Mullis, Jr.

[11] **3,757,549**

[45] **Sept. 11, 1973**

[54] **OUTBOARD MOTOR CLAMP SCREW LOCK**

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[22] Filed: **Apr. 28, 1972**

[21] Appl. No.: **248,435**

[52] **U.S. Cl.** **70/232**, 70/14, 70/58, 70/211, 137/383

[51] **Int. Cl.** ... **G05b 73/00**, G05g 5/00, F16b 41/00

[58] **Field of Search** 70/14, 58, 198, 199, 70/200, 211, 230, 232, 229; 137/383

[56] **References Cited**

UNITED STATES PATENTS

2,677,264	5/1954	Hanaford et al.	70/230
3,287,943	11/1966	Vaughn et al.	70/232 X
2,703,501	3/1955	Wooldridge	70/232
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Assistant Examiner—Richard P. Tremblay
Attorney—Gustave Miller

[57] **ABSTRACT**

This is a device for locking an outboard motor on the transom of a boat so as to make it extremely difficult, if not impossible, for a thief to steal the outboard motor from the boat transom. Outboard motors are usually mounted on the boat transom by having a pair of spaced apart C-clamps secured over the transom. With this device, an elongated housing consisting of a tough metal strong box, partly open in its real wall, is hung over the clamping screw handles, the handles having alignable transverse apertures therethrough, and a tough metal bolt is extended through apertures in the confronting and side walls of the strong box and through the aligned apertures in the clamp screw handle ends. A tough metal lock nut is threaded on at least one end of the bolt, a key being needed and used to unlock the nut before it can be unthreaded. The nut is of the same type that is used for locking demountable automobile wheels on their hubs to prevent theft thereof. The tough metal of the bolt and nut, and also the strong box, is such as is used in the metal walls of a safe or vault. To increase the security, the bolt head and the lock nut may also be countersunk within a guard ring extending externally of the confronting end walls or, for maximum security, a guard thimble is countersunk with the confronting end walls, thus making it impossible to get access thereto with a bolt cutter or hacksaw or other burgler tool.

7 Claims, 4 Drawing Figures

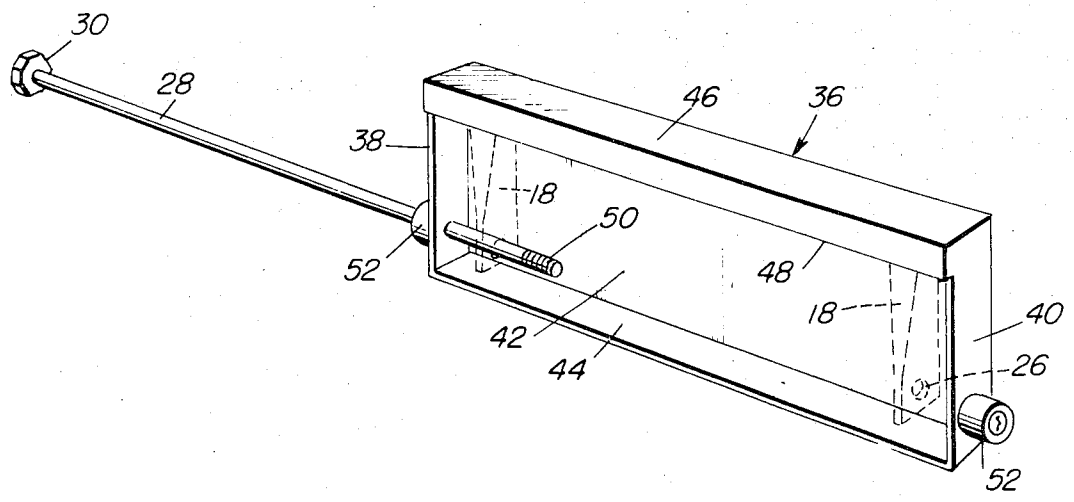


FIG. 1

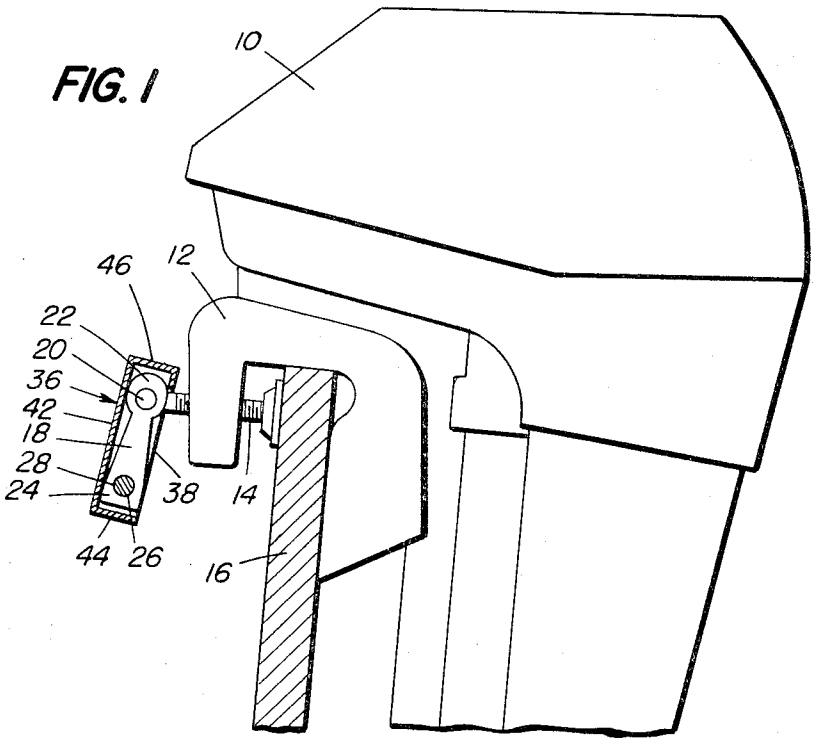


FIG. 2

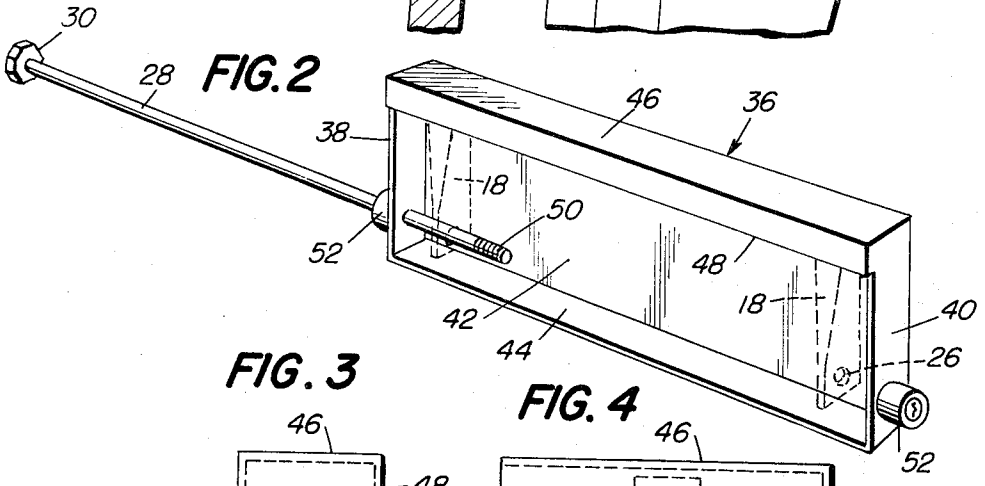


FIG. 3

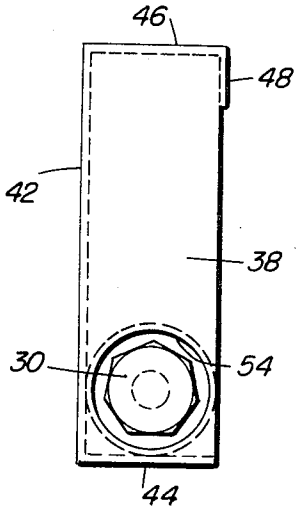
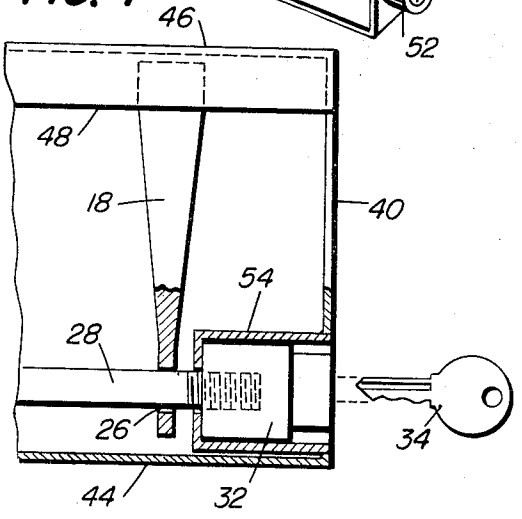


FIG. 4



OUTBOARD MOTOR CLAMP SCREW LOCK

BACKGROUND OF THE INVENTION

Outboard motors are usually secured to the transom of the boat by C-shaped clamps, and the clamp screws are rotatable by handles pivoted thereto about an axis perpendicular to the rotational axis of the clamp scress, the handles having alignable apertures at their other ends. Various means have been provided for locking the clamp screw handles, such as a bolt through the handles and a padlock through the bolt end, as in U. S. Pat. No. 2,677,264, or similar devices such as illustrated in U. S. Pat. Nos. 1,741,205; 2,479,300; and 2,703,501. All these devices have one element in common, a padlock, which can be easily and quickly cut by a bolt cutter or hacksaw by the thief, with hardly any delay in completing the theft.

OBJECTS OF THE INVENTION

It is an object of this invention to provide a locking means for the outboard motor clamp which does not use a padlock that may be easily cut by a bolt cutter or hacksaw, but which uses a tough metal wheel locking nut on the end of a bolt of tough metal, and wherein the bolt may be further protected against access thereto by a bolt cutter or hacksaw by being encased, with the clamp handles, in a tough metal strong box. A further object of this invention is to provide an outboard motor clamp which is substantially theft proof, or which, at worst, takes an extremely long time to overcome, much more time than a thief would expect to have available in a public marina without arousing suspicion.

A further object of this invention is to provide a tough metal bolt for locking the clamp screw handle of the motor clamp and which resists the action of a bolt cutter or hacksaw. Still a further object of this invention is to provide a locking means for an outboard motor clamp which cannot be overcome by the use a bolt cutter or hacksaw or even by a sledge hammer.

A still further object of this invention is to provide a locking means for the clamp screws of an outboard motor which can be unlocked only by use of the locking key provided for the lock.

Yet, a further object of this invention is to provide a tough metal strong box housing for enclosing the handles of the mounting clamps of the outboard motor and for enclosing a tough metal bolt through the handles, the bolt being locked by a lock nut, and the bolt head and the lock nut both being enclosed or countersunk on or in the housing against access by a bolt cutter or hacksaw, the tough metal being such as stainless steel or casehardened steel or other similar material such as used in the wall of a safe or vault.

BRIEF DESCRIPTION OF THE FIGURES

FIG. 1 is a sectional view through the locking means of this invention as applied to the clamp screws of an outboard motor clamp.

FIG. 2 is a perspective view of the locking housing with countersink guards on the outer end walls of the housing.

FIG. 3 is an end view of the bolt head end guard ring or thimble countersunk within the end walls.

FIG. 4 is a partially sectional view of the opposite end of FIG. 3, with the nut lock countersunk in a guard thimble or ring countersunk within the end wall of the guard box.

DETAILED DESCRIPTION OF THE INVENTION

There is shown at **10** a conventional outboard motor of any conventional style provided with a pair of conventional spaced apart C-clamps **12**, each clamp **12** having its conventional clamping screw **14** rotatably threaded against the boat transom **16** by its conventional handle **18** pivoted at **20** thereon at right angles to the axis of rotation of the screw **14**. Each handle **18** has its pivoted end **22** project somewhat above the handle pivot **20**, and the other end **24** of the handle **18** conventionally has an aperture **26** therethrough. Conventionally, a bolt may be placed through the apertures **26** with a padlock through the bolt end to lock the handles against rotation for theft of the motor, as illustrated in above mentioned U.S. Pat. No. 2,677,264, and prevents the motor from being too easily stolen, particularly by an amateur. However, a professional thief may use a bolt cutter or hacksaw on either the bolt or the padlock, in a very few seconds of time, and be only very slightly delayed in the theft.

With this invention, a bolt **28** is likewise used, but, instead of being an ordinary bolt, it is made of a very tough metal, such as stainless steel or case-hardened steel, or of other similar materials such as used in the walls of a safe or vault. The bolt head **30**, instead of being conventional, may be seven sided, as shown for cooperating with a special seven sided socket wrench, which may be provided with this device. Instead of a padlock, an automobile wheel locking nut **32** is used. This nut can be opened only by a special key **34** before the nut may be rotated in the unlocking direction. The lock nut will preferably also be of similar tough metal. This tough metal bolt and lock nut are probably sufficient against the usual bolt cutter, but to enhance the protection, a safe box or lock box **36** is used as a housing for the bolt **28** and the clamp handles **18**.

This strong box or housing **36** is made of similar tough metal, such as stainless steel or case-hardened steel, or of such metal as the walls of safes or vaults are usually made, and its walls may be made of suitable thickness to enhance its toughness. This housing **36** is an elongated parallelepiped in shape. It has two ends walls **38** and **40** connected together by a solid front wall **42**, an elongate bottom wall **44**, and elongate top wall **46** and a back ledge **48**, leaving an opening so that the box **36** may hang over the top ends **22** of handles **18** and enclose the handles **18** completely therewithin, and then the bolt **28** may be inserted through the end wall apertures and handle apertures **26**. The nut **32** is then threaded onto the threaded end **50** of bolt **28**. As thus already described, a great deal of security is provided to the motor, because the main part of the bolt is inaccessible to a bolt cutter, and neither the bolt head **30** or lock nut **32** can be readily actuated to release the bolt.

An additional step of security is provided by countersinking the bolt head **30** and nut **32** within a guard ring **52** secured about the bolt apertures in the end walls **38** and **40**.

In one form, shown in FIG. **2**, the guard rings **52**, of similar tough metal, are secured to and external of the end walls **38** and **40**, thereby making the bolt head **30** and nut **32** completely inaccessible to a bolt cutter or even a sledge hammer.

Maximum security is provided by mounting the guard rings or thimbles **54** entirely within and on the inner

sides of the end walls **38** and **40**, as shown in FIGS. **3** and **4**. In this case, the guard rings or thimbles **54** are thus countersunk entirely within end walls **38** and **40** of the housing **36**, making the bolt head **30** and nut **32** entirely inaccessible to any type of jimmy, bolt cutter or hacksaw, and thus probably completely discouraging any would-be thief.

ABSTRACT OF THE DRAWING

In the drawing, like numbers refer to like parts, and for purposes of explication, marshalled below are the numbered parts of the improved outboard motor clamp screw lock.

CONVENTIONAL FEATURES

10 conventional outboard motor
12 motor mounting C-clamp
14 clamp screw
16 boat transom
18 pivoted clamp screw handles
20 pivot of **18** on **14**
22 handle end projecting beyond pivot **20**
24 opposite end of handle
26 apertures in handle ends **24**

IMPROVEMENT FEATURES

28 bolt of tough metal
30 head of bolt **28**
32 wheel lock nut
34 key for lock nut **32**
36 housing or strong box of tough metal
one end wall of **36**
40 other end wall
42 solid front wall
44 bottom wall
46 top wall
48 back wall ledge
50 threaded end of bolt **28**
52 outwardly extending guard rings on end walls **38** and **40**
54 inwardly extending guard rings or thimbles countersunk within the end walls **38** and **40.**

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed. Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. Locking means for the spaced apart clamp screws (**14**) of an outboard motor (**10**) clamp bracket (**12**) having handles (**18**) pivotally connected (**20**) each adjacent one end (**22**) to the outer end of an associated clamp screw (**14**) for pivotal movement about an axis perpendicular to the rotational axis of the associated clamp screws (**14**) and each handle (**18**) having a transverly extending aperture (**26**) adjacent its other end; the improvement comprising an elongated parallelepied strong box (**36**) of tough metal of a length somewhat longer than the distance between the handles (**18**), of a height slightly greater than the length of the handles (**18**), of a depth greater than the depth of the handles (**18**), its back wall having an opening to admit the handles (**18**) therewithin when in depending position, said back wall providing a ledge depending behind the upper ends (**22**) of the handles (**18**) projecting above their pivotal connections, the confronting end walls (**38, 40**) of said box (**36**) having apertures aligning with the apertures (**26**) of said handles (**18**) when said handles are in depending position, and a tough metal bolt (**28**) extendible through said aligned apertures (**26**) and threaded on at least one end to receive a lock nut thereon.

2. The means of protecting the metal boltand lock nut from bolt cutters, hacksaw and hammer a ring guard wherein ring guards (**52,54**) are secured on said confronting end walls (**38,40**) about said bolt apertures for countersinking the bolt ends (**30,50**) therewithin, said bolt apertures being of a diameter to receive the bolt (**28**) therethrough, but not to permit the lock nut to pass therethrough.

3. The locking means of claim **2**, said ring guard (**54**) being countersunk within said confronting end walls.

4. The locking means of claim **2**, said ring guard (**52**) extending outwardly from said confronting end walls (**38, 40**).

5. The locking means of claim **1**, said tough metal being stainless steel.

6. The locking means of claim **1**, said tough metal being case-hardened steel.

7. The locking means of claim **1**, said tough metal being vault-wall metal.

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