An ignition-kill device for use with marine engines and particularly outboard marine engines which includes a tension member attached to the ignition key of the engine and a flexible wire connected to one end of the tension member, the other end of the flexible wire being attached to the operator of the boat, thereby providing a means by which the ignition will be forced into the "off" position if the operator is thrown from the boat.

4 Claims, 4 Drawing Figures
OPERATION ACTUATED IGNITION-KILL DEVICE

This is a continuation-in-part of prior application Ser. No. 301,427, filed Oct. 27, 1972.

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a new and improved ignition-kill device whereby marine engines and particularly outboard motors and inboard-outboard marine engines may be switched off if the operator of the boat is suddenly and unexpectedly thrown from his operating position. The ignition-kill device is simple, easy to use and provides a highly reliable mechanism for killing the engine in the event of such an unexpected accident. Existing ignition keys may be readily adapted to safeguard the operator by application of this invention and the invention requires no internal wiring in order to be functional.

2. Description of the Prior Art

Heretofore, various apparatus, and wiring techniques have been developed to provide protection for boat operators and particularly for boats which utilize outboard engines and inboard-outboard engines under circumstances where the operator is suddenly forced out of his operating position by the striking of a submerged object or other object. Following many unfortunate deaths resulting from the operations of such boats being thrown from the boat and then run over by the boat and engine, there was an increase in the sales of the chest-type, bouyant life preservers. New types of bouyant preservers have been developed and are highly reliable for keeping the user afloat when he falls or is thrown into the water, but the use of such a device does not protect the boat operator under circumstances where he is thrown from the boat directly in the path of the engine and is run over by the engine.

In recent years there have been developed several seat belts and devices wired into the motor ignition circuit to kill the engine in the event the boat strikes a submerged object. However, the use of seat belts presents a hazard in that if the boat happens to overtake a result of striking an object or due to a mechanical malfunction of some type the user would be trapped by the seat belt and might not be able to extricate himself before drowning. Furthermore, the use of spring-loaded, open contact switches which are mounted on the floor of the boat and depressed while the motor is operating have been utilized, the thought being that if the driver was thrown from the boat the switch would be released and the motor automatically killed. However, this device is subject to the disadvantage that if one happens to inadvertently take his foot off the switch the motor dies resulting in a sudden stopping of the boat which could cause injury to the driver or to occupants of the boat. Furthermore, much extra wiring must be installed in the boat at additional cost, which wiring must necessarily carry a high current thereby providing the hazard of shock.

Accordingly, an object of this invention is to provide a new and improved method of killing an engine in inboard-outboard and outboard type boats in the event the operator is thrown from the boat or from his normal operating position in the boat.

Another object of the invention is to provide a safe, highly reliable and simple device for turning the ignition key from the "on" to the "off" position in the event the boat operator is displaced from his normal seating position in the boat.

Still another object of the invention is to provide an ignition-kill device for safeguarding the occupants of the boat in the event the boat strikes a submerged object, which method requires no extensive wiring and which may be easily and quickly utilized simply by plugging the key into the ignition.

SUMMARY OF THE INVENTION

These and other objects of the invention are provided in an ignition-kill device which includes a tension member attached to the ignition key of an engine and a cable attached to the end of the tension member opposite the end attached to the key, the terminal end of the cable being attached to the boat operator. The cable is threaded through a cable positioning member affixed to the boat and located between the key and the terminal end of the cable. Attachment of the cable to the boat operator may be effected by alligator clips or a similar tension device which may be easily attached and removed at the option of the driver. The length of the cable should be chosen such that the operator may move about freely in the seat and yet if he is displaced from the seat to any great extent the tension of the cable through the cable positioning member causes the ignition key to turn from the "on" to the "off" position and kill the engine.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood in view of the following description presented with reference to the accompanying drawings.

FIG. 1 of the drawings is a perspective view of the ignition-kill device of this invention;

FIG. 2 is a front elevation of the engine-kill device of this invention illustrating the ignition key in the "on" position;

FIG. 3 is a front elevation of the ignition-kill device illustrating the position of the ignition key in the "off" position when tension is placed on the cable; and

FIG. 4 is a side elevation of the cable positioning member illustrated in FIGS. 1 and 2.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to FIG. 1 of the drawings, the ignition-kill device of this invention generally indicated by reference number 1, is disclosed, showing ignition key 4, tension member 5 and tension cable 6 attached to the end of tension member 5. To the terminal end of tension cable 6 opposite the connection with tension member 5, tension cable clip 7 is attached and is adapted to be clipped to the boat operator's clothing.

As illustrated in FIGS. 2 and 4, ignition key 4 is inserted in ignition key slot 3 (illustrated in FIG. 1) of ignition 2, and turned to the "on" position, where tension member 5 describes approximately a 45° angle with the vertical. Tension cable 6 is then inserted in ring 9 of cable positioning member 11 mounted on block 8, through ring opening 10. Block 8 may be mounted on the steering console of the boat, or, in the alternative, cable positioning member 11 may be affixed directly to the console or other area of the boat located between ignition key 4 and tension cable clip 7. Under normal operating conditions the key will, of course, remain in the "on" position with tension cable 6 threaded
through ring 9 of cable positioning member 11 and tension cable clip 7 attached to the operator, who is positioned to the left of the ignition and essentially immediately behind the cable positioning member. Of course, it will be appreciated that the cable positioning member can be positioned in substantially any desired location near the operator, provided the cable is threaded through the cable positioning member ring. Should the boat strike a submerged object or other object which causes the operator to be thrown from the seat, the slack in tension cable 6 is removed by the movement of the operator's body, and tension cable 6 becomes taut through ring 9, resulting in the switching of ignition key 4 from the "on" position to the "off" position as illustrated in FIG. 3. This action causes the engine to stop, thereby removing the danger of the operator being thrown into the water and subsequently run over by the boat and motor.

It will be appreciated that through application of cable positioning member 11, if the boat driver is thrown in substantially any direction from the driver's seat, ignition key 4 will be forced to the "off" position as illustrated in FIG. 3. It will be further appreciated that ring opening 10 should be slightly smaller than tension cable 6 in order to necessitate forcing the cable into the ring to prevent the cable from slipping out of ring 9 during normal operation of the boat. Alternatively, cable positioning member 11 may be designed in "corkscrew" fashion so that tension cable 6 can be inserted inside the corkscrew coils without fear of accidental removal by normal operation of the boat, or ring 9 may be large enough to permit threading of tension cable clip 7 through the ring. The cable positioning member 11 may also be a ring mounted in proper position and having no opening in the periphery thereof under circumstances where tension cable 6 is removably attached to either ignition key 4 or tension cable clip 7.

While tension cable 6 is preferably formed of flexible, braided wire to provide a cable of sufficient strength, it may also be cord, string, chain or other flexible member according to the desires of the user.

What is claimed is:

1. An ignition-kill device for use in a key-operated boat comprising:
   a. a tension member attached in essentially vertical relationship to the key of said key-operated boat;
   b. a flexible member attached to the free end of said tension member;
   c. means attached to the free end of said flexible member for securing said free end of said flexible member to the operator of said boat; and
   d. a ring attached to said boat and located between said key and said means attached to the free end of said cable, said cable being positioned through said ring.

2. The ignition-kill device of claim 1 wherein said flexible member is a cable.

3. The ignition-kill device of claim 1 wherein said means attached to the free end of said flexible member is an alligator clip.

4. The ignition-kill device of claim 1 wherein:
   a. said flexible member is a cable; and
   b. said means attached to the free end of said cable is an alligator clip.

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