

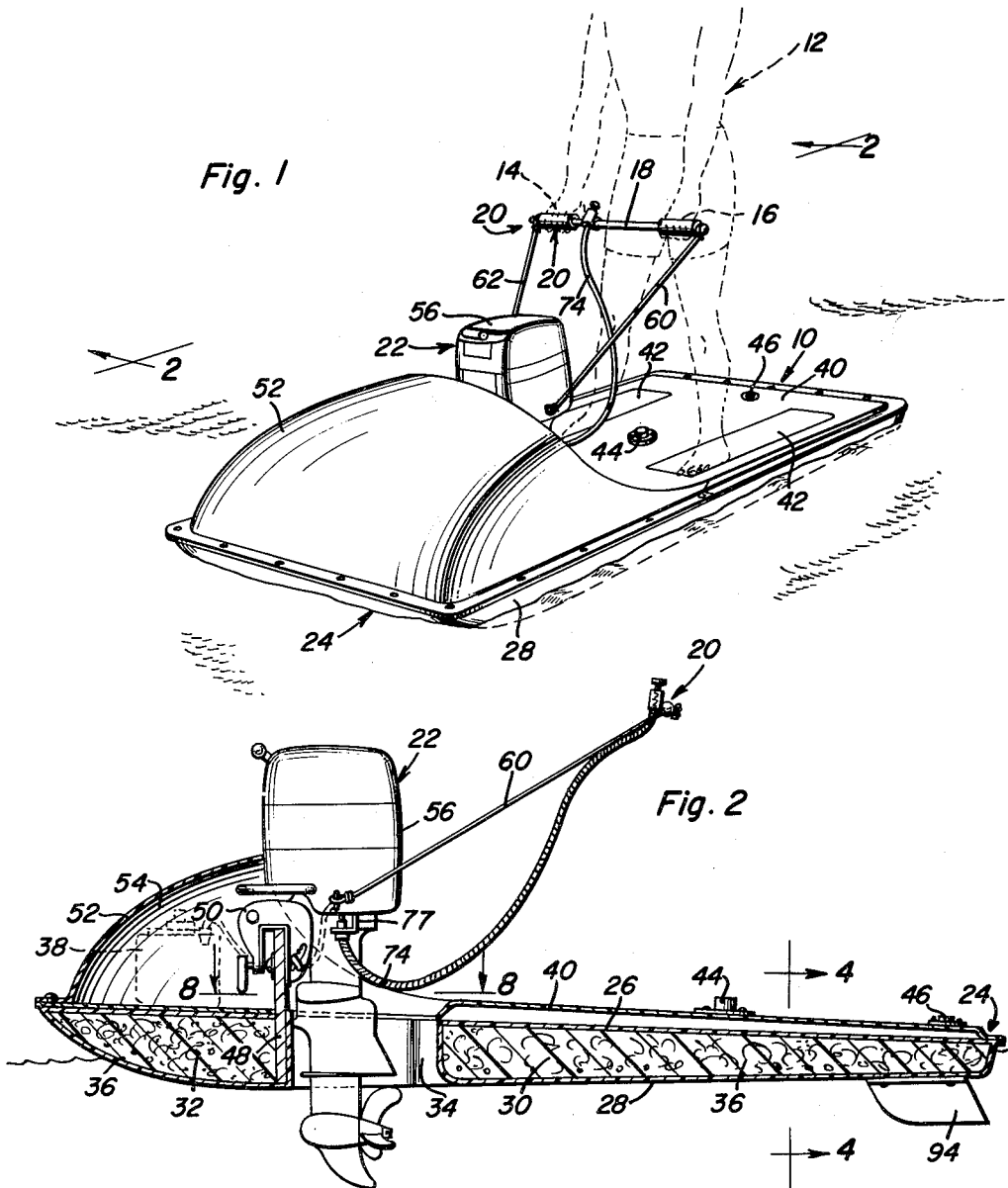
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G. W. HARDY
MOTORIZED SKI SLED

3,136,288

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2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3

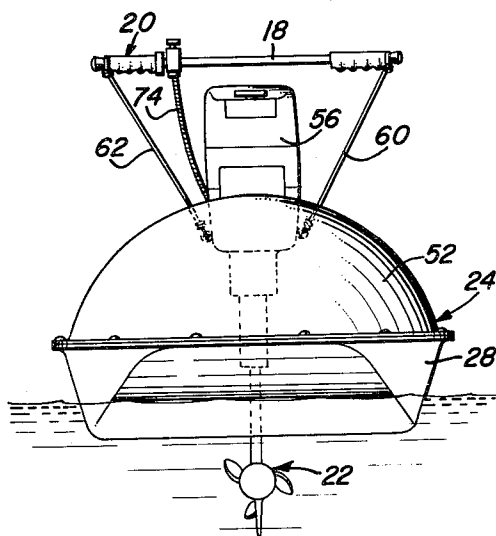


Fig. 4

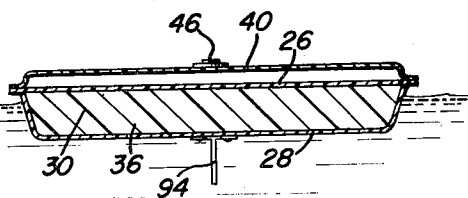


Fig. 5

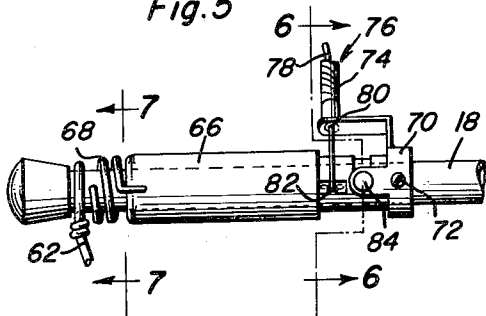


Fig. 6

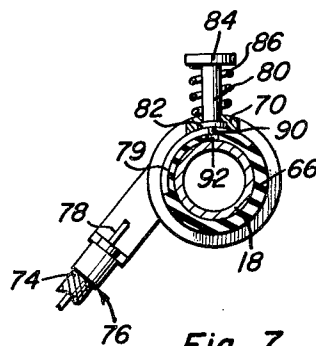


Fig. 7

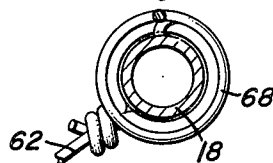
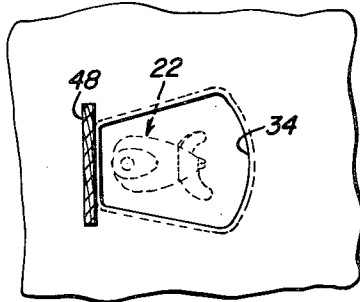


Fig. 8



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MOTORIZED SKI SLED

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7 Claims. (Cl. 115-70)

This invention relates to a novel and useful ski sled and more specifically to a hydroplane-type of water vehicle which is provided with an opening adjacent its forward end and means for supporting an outboard motor with the power head thereof disposed above the main body portion of the ski sled and its lower unit projecting downwardly through the opening with the propeller of the outboard motor disposed beneath the lower surface of the ski sled.

The motorized ski sled of the instant invention is designed primarily to be operated by a person in a standing position such as is conventional when riding a hydroplane being towed behind a speedboat and suitable controls for controlling the speed of operation of the outboard motor and for rotating the outboard motor about an upstanding axis are provided whereby the motorized ski sled of the instant invention may be steered in a manner simulating the manner in which an outboard motorboat is steered.

The motorized ski sled of the instant invention includes an elongated buoyant panel which defines the main body portion thereof and an upstanding transversely extending panel-like support member is provided for simulating the transom of a boat whereby a conventional type of outboard motor may be supported from the ski sled by conventional methods, the upright transversely extending support member being disposed forwardly of the opening formed in the forward end of the buoyant panel whereby the depending lower unit may project downwardly through the opening in order to position the propeller of the outboard motor beneath the lower surface of the buoyant panel.

The main object of this invention is to provide a novel and useful water vehicle which will be self-propelled and yet which may be ridden in a manner simulating the manner in which a towed aquaplane is usually ridden.

A further object of this invention, in accordance with the preceding object, is to provide a ski sled constructed in a manner whereby a seat construction may be readily supported therefrom in order to enable the rider of the ski sled to be supported in a seated position.

Still another object of this invention is to provide a control assembly for steering the outboard motor of the ski sled and for controlling the throttle controls of the outboard motor.

Another object of this invention is to provide steering and throttle controls for the outboard motor which may be readily manipulated by the operator of the ski sled while in a standing position.

Still another object of this invention is to provide the operating controls of the ski sled with means whereby the throttle control of the outboard motor will be automatically returned to a fully off position in the event the rider is thrown from the ski sled.

A further object of this invention is to provide a motorized ski sled including a buoyant panel which is constructed so as to define a plurality of individual airtight compartments.

Another object of this invention is to provide each of

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the airtight compartments of the water ski sled body panel with buoyant material in order that the buoyancy of the panel may be maintained even if one of the compartments is ruptured.

5 A final object of this invention to be specifically enumerated herein is to provide a motorized ski sled in accordance with the preceding objects which will conform to conventional forms of manufacture, be of simple construction and easy to ride so as to provide a device that will be economically feasible, long lasting and relatively trouble free in operation.

10 These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

15 FIGURE 1 is a perspective view of the motorized ski sled of the instant invention;

20 FIGURE 2 is an enlarged longitudinal vertical sectional view taken substantially upon the plane indicated by the section line 2-2 of FIGURE 1;

25 FIGURE 3 is a front end elevational view of the motorized ski sled;

FIGURE 4 is a transverse vertical sectional view taken substantially upon the plane indicated by the section line 4-4 of FIGURE 2;

30 FIGURE 5 is a fragmentary top plan view of the control assembly of the outboard motor by which the ski sled is powered;

FIGURE 6 is an enlarged fragmentary transverse sectional view taken substantially upon the plane indicated by the section line 6-6 of FIGURE 5;

35 FIGURE 7 is an enlarged transverse sectional view taken substantially upon the plane indicated by the section line 7-7 of FIGURE 5; and

40 FIGURE 8 is a fragmentary horizontal sectional view taken substantially upon the plane indicated by the section line 8-8 of FIGURE 2.

Referring now more specifically to the drawings the numeral 10 generally designates the motorized ski sled of the instant invention. The lower portion of an operator generally referred to by the reference numeral 12 may be seen disposed in an upright standing position on the ski sled 10 in FIGURE 1 of the drawings with the hands 14 and 16 of the operator 12 grasping the opposite ends of the control shaft 18 which comprises a part of the control assembly generally referred to by the reference numeral 20 for the outboard motor which is generally referred to by the reference numeral 22.

45 From FIGURES 2 through 4 of the drawings it may be seen that the motorized ski sled 10 includes an elongated buoyant panel or body member generally referred to by the reference numeral 24 which includes top and bottom panels 26 and 28 that are secured together along their peripheral edge portions so as to define a plurality of individually watertight compartments 30 and 32. Although divider baffles are not shown, it is to be understood that they extend transversely of the buoyant panel 24 on opposite sides of the vertical opening 34 formed through the buoyant panel. The divider baffles or walls will of course extend between the upper and lower panels 26 and 28.

50 The watertight compartments or chambers 30 and 32

may be filled with any suitable form of buoyant material 36 in order that the buoyancy of each compartment or chamber 30 and 32 will not be totally lost in the event either panel 26 and 28 is ruptured.

The rear of the buoyant panel 24 includes a false top panel 40 on which the operator 12 is supported and the false top panel 40 may be provided with suitable non-skid tread members 42 and upwardly opening sockets 44 and 46 for the reception of the standards for a seat assembly and flag respectively.

Formed integrally in the construction of the panel member 24 is an upright transversely extending support member 48 which simulates the transom of a boat and to which the outboard motor 22 is removably secured by means of a conventional clamp and hinge assembly 50.

A cowl assembly 52 is secured to the upper panel 26 and defines, together with the upper panel 26, a rearwardly opening recess 54 for housing the lower portion of the power head 56 of the outboard motor 22, the clamp and hinge assembly 50 and the fuel tank 58 for the outboard motor 22.

The control assembly 20 includes a pair of bridle lines or members 60 and 62 which have corresponding ends secured to opposite sides of the outboard motor 22. The other pair of corresponding ends of the bridle lines 60 and 62 are secured to opposite ends of the control shaft 18 whereby either end of the control shaft 18 may be pulled rearwardly by the corresponding hand of the operator 12 in order to effect a turn of the motorized ski sled in the corresponding direction.

With attention now directed to FIGURES 5 through 7 of the drawings it will be seen that a handgrip in the form of a sleeve member 66 is rotatably supported on one end of the control shaft 18 and is yieldingly urged in one direction of rotation by means of a coil spring 68 secured between the handgrip 66 and the control shaft 18. A support bracket assembly 70 is keyed to the support shaft 18 by means of a setscrew 72 and has one end of the housing 74 of a Bowden cable assembly generally referred to by the reference numeral 76 secured thereto. The core 78 of the Bowden cable assembly 76 is slidably received through the housing 74 and through an aperture 80 formed in the bracket 70 and has one end secured to the handgrip or sleeve 66 as at 82. The end of the housing 74 remote from the control shaft 18 is secured to a suitable bracket 77 supported from the power head 56 of the outboard motor and the end of the core 78 remote from the handgrip 66 is secured to a movable throttle control (not shown) of the outboard motor 22.

The sleeve 66 has a circumferential slot 79 formed therein and a spring-urged elongated locking pin or plunger 80 is supported from the bracket 70 for longitudinal reciprocal movement between limit positions defined by the diametrically enlarged head portion 82 of the locking pin 80. The free end of the locking pin 80 also includes a diametrically enlarged head portion 84 and a compression spring 86 is disposed between the head portion 84 and the bracket 70 and normally yieldingly urges the locking pin 80 generally radially outwardly of the longitudinal axis of the control shaft 18. The inner end of the locking pin 80 is provided with a reduced diameter projection 90 which is slidably received in the slot or groove 79 formed in the sleeve 66 and which is also registrable with a radial bore 92 formed through the sleeve or handgrip 66.

It may be seen from FIGURES 2 and 4 of the drawings that the bottom panel 28 is provided with a depending skeg or fin 94 which may be of any desired size or which may be eliminated if desired.

In operation, when it is desired to start the outboard motor, the handgrip 66 is turned in a clockwise direction, against the tension of the spring 68 to the position illustrated in FIGURE 6 of the drawings. Then, the locking pin 84 may be depressed so that the end portion 90 is received in the bore 92. Thereafter, the tension of the

spring 68 will retain the locking pin 80 in engagement with the bore 92 and against retraction from the bore 92. In this position, the throttle controls of the outboard motor 22 are in the starting position. After the outboard motor 22 has been started, it may be placed in gear and the handgrip 66 may be further rotated in a clockwise direction as viewed in FIGURE 6 of the drawings in order to increase the power delivered by the outboard motor 22. Should the operator 12 be thrown from the ski sled, the coil spring 68 will return the throttle controls of the outboard motor to the full off position whereby operation of the outboard motor 22 will be terminated and the operator 12 may swim to and remount the ski sled 10.

As previously set forth, the ski sled 10 may be provided with any suitable type of seat construction and it is to be understood that the ski sled may be constructed of a size to accommodate more than one operator or passenger.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A motorized ski sled comprising an elongated buoyant panel having an access opening formed therein adjacent its forward end, an outboard motor including a depending lower unit assembly and means supporting said outboard motor from said buoyant panel with said lower unit projecting downwardly through said opening and mounted for rotation with said motor about the longitudinal axis of said lower unit relative to said panel, control bridle members secured at corresponding ends to said motor on opposite sides of said axis, a control shaft, the ends of said bridle members remote from said motor being secured to opposite end portions of said control shaft, a movable handgrip mounted on said control shaft, said motor including a movable throttle control, a Bowden cable secured at one end to said throttle control and to said handgrip at the other end operatively connecting said handgrip to said throttle control for moving the latter in response to movement of said handgrip relative to said control shaft, means connected between said handgrip and said control shaft yieldingly urging said handgrip in one direction to a first position completely closing said throttle control, and automatically releasable means carried by said control shaft and engageable with said handgrip for selectively limiting movement of said handgrip toward said first position, said automatically releasable means including means automatically releasable from engagement with said handgrip in response to movement of said handgrip in a direction urging said throttle control toward the full open position.

2. The combination of claim 1 wherein said handgrip comprises a sleeve member rotatably mounted on one end portion of said control shaft.

3. The combination of claim 2 wherein said means yieldingly urging said handgrip in one direction includes means yieldingly urging rotation of said handgrip in one direction relative to said control shaft.

4. The combination of claim 3 wherein said sleeve member has a radial bore formed therein, said automatically releasable means comprises an elongated locking pin supported from said control shaft for longitudinal reciprocal movement generally radially of said sleeve between a first limit position with the inner end thereof disposed outwardly of said sleeve and a second limit position with the inner end thereof disposed inwardly of the outer end of said radial bore, means yieldingly urging said pin radially outwardly of said control shaft, said means yieldingly urging rotation of said sleeve

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in said one direction and the frictional engagement of the wall of said radial bore with the inner end of said locking pin being sufficient to prevent said means yieldingly urging said pin outwardly of said control shaft to retract said pin from said radial bore.

5. The combination of claim 1 wherein said elongated buoyant panel is constructed of water impervious material and defines a plurality of hollow sealed compartments in which lightweight buoyant material is disposed.

6. The combination of claim 5 wherein some of said compartments are disposed rearwardly of said opening 10 formed in said buoyant panel and at least one of said compartments is disposed forwardly of said opening.

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7. The combination of claim 1 wherein said buoyant panel includes means, together with the upper surface of said panel, defining a rearwardly opening shield disposed over said opening for enclosing the upper portion of 5 said outboard motor.

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