United States Patent [19]

Kueny

[11] **3,835,807**

[45] **Sept. 17, 1974**

[54] **SHALLOW WATER DRIVE LINK CONTROL**

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[22] Filed: **Aug. 6, 1973**

[21] Appl. No.: **386,082**

[52] **U.S. Cl.** ..... **115/41 R,** 115/17

[51] **Int. Cl.** **B63h 21/26**

[58] **Field of Search** ..... 115/41 R, 41 HT, 34 R, 115/17; 248/4

[56] **References Cited**

UNITED STATES PATENTS

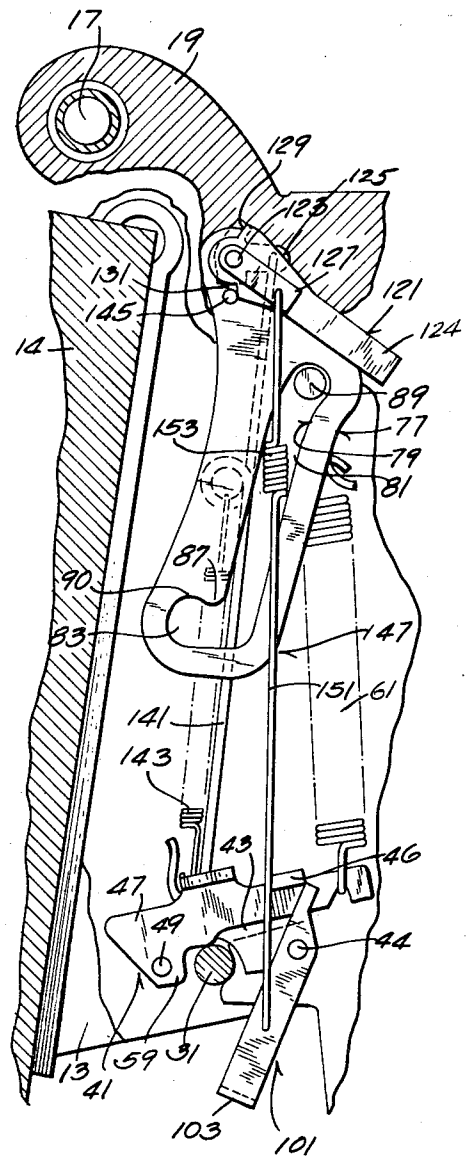
3,576,173 4/1971 Ginnow ..... 115/41 R

Primary Examiner—Trygve M. Blix
Assistant Examiner—Charles E. Frankfort
Attorney, Agent, or Firm—Michael, Best & Friedrich

[57] **ABSTRACT**

Disclosed herein is a marine propulsion device including a reverse lock movably mounted on a swivel bracket for releasable engagement with a thrust pin to retain the swivel bracket in normal operating position, a shallow water drive link mounted on the swivel bracket for movement relative to a position for releasable engagement with the thrust pin to retain the swivel swivel bracket in the shallow water drive position, and a selectively operable control mechanism mounted on the swivel bracket and including an element operably connected to the reverse lock, and to the shallow water drive link for controlling releasable engagement of the thrust pin by the reverse lock and for displacing the shallow water drive link relative to a position affording releasable engagement with the thrust pin.

10 Claims, 4 Drawing Figures



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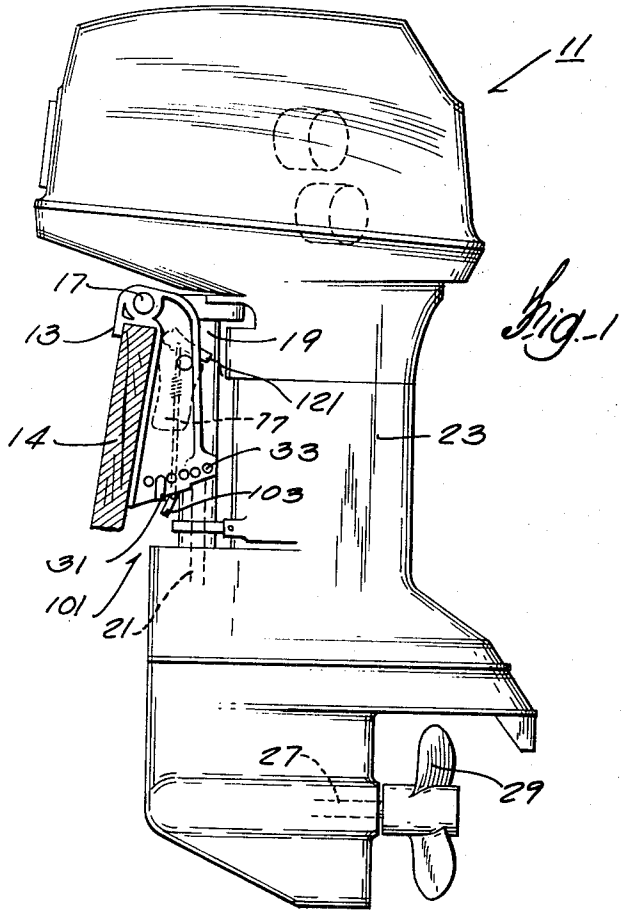

Fig. 1

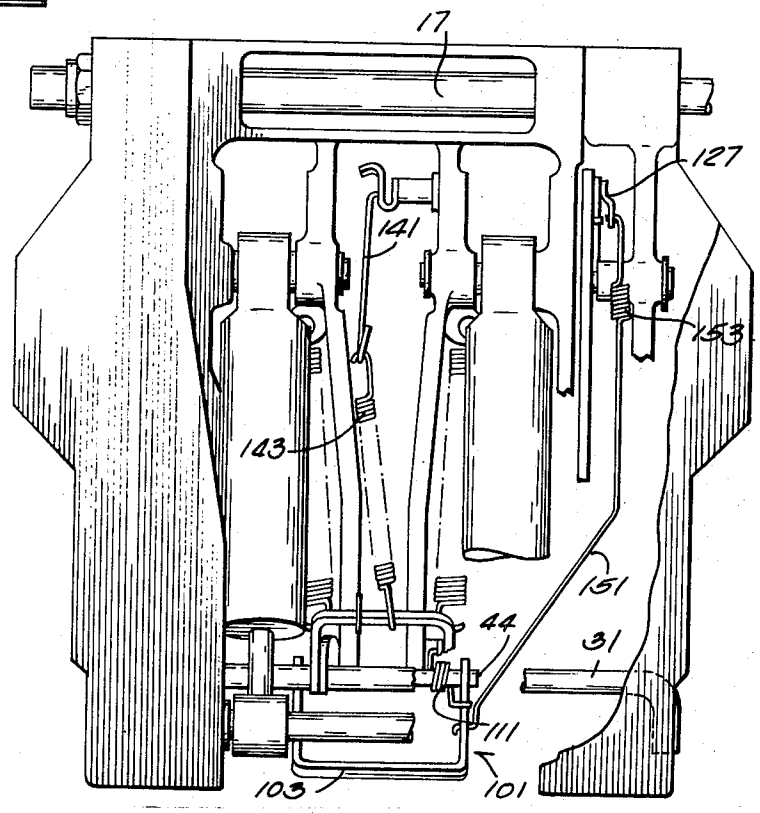

Fig. 2

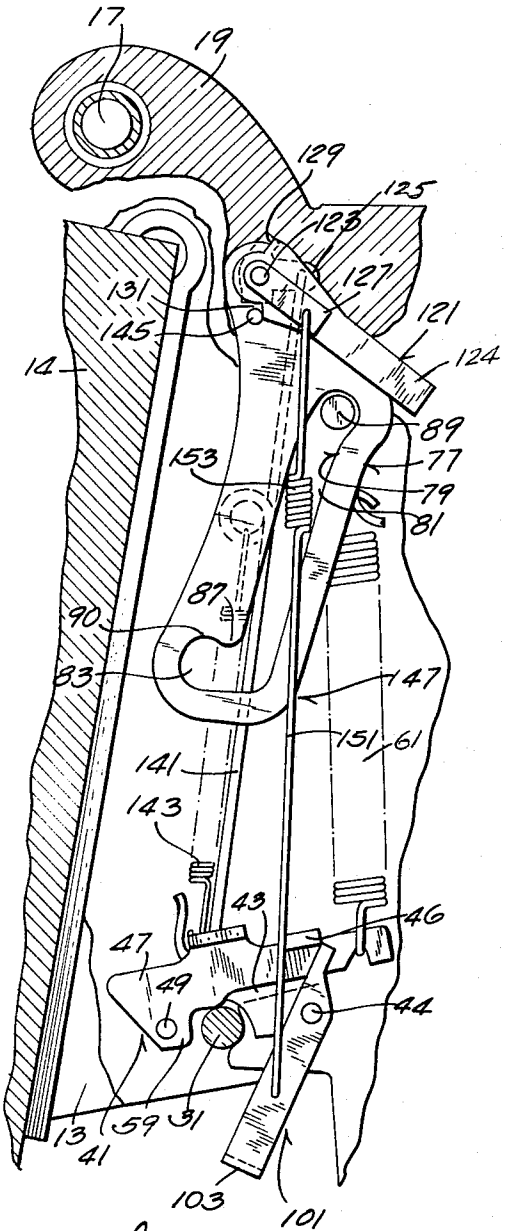
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Fig. 3

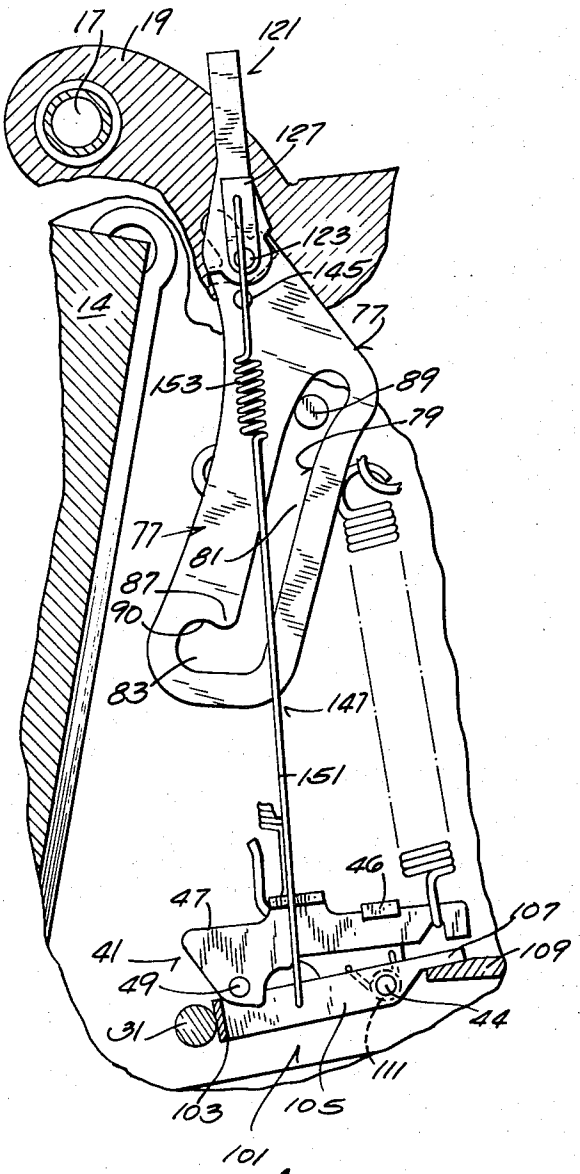
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Fig. 4

SHALLOW WATER DRIVE LINK CONTROL

BACKGROUND OF THE INVENTION

The invention relates generally to marine propulsion devices, such as outboard motors and stern drive units, and, more particularly, to shallow water drive links for such marine propulsion devices.

Outboard motors commonly include a mounting bracket adapted to be attached to the transom of a boat and a swivel bracket connected to the mounting bracket for movement about a tilt axis between a normal running or operating position, a raised swivel bracket position, and a partially elevated shallow water drive position located intermediate the raised swivel bracket position and the normal running position.

Outboard motors have also previously included shallow water drive links which are pivotally mounted on the swivel bracket for movement relative to a position of engagement with a thrust pin supported by a mounting bracket, either by direct manual manipulation of the shallow water drive link or in response to movement of reverse lock elements.

Attention is directed to the following U.S. Pat. Nos.:

Ginnow 3,576,173 issued Apr. 27, 1971; Hulsebus Re-25,048 issued Oct. 3, 1961; Anderson 3,016,896 issued Jan. 16, 1962.

Attention is also directed to the U.S. Shimanckas application Ser. No. 271,198 which was filed July 12, 1972, now U.S. Pat. No. 3,785,329, and assigned to the assignee of this application, and which is incorporated herein by reference.

SUMMARY OF THE INVENTION

The invention provides a marine propulsion device comprising a swivel bracket connected to a support bracket for pivotal movement therebetween relative to a normal operating swivel bracket position, a raised swivel bracket position, and a shallow water drive position located intermediate the normal operating position and the raised position, together with a reverse lock mounted on the swivel bracket for releasable engagement with the thrust pin to retain the swivel bracket in the normal operating position, a shallow water drive link mounted on the swivel bracket for movement relative to a position for releasable engagement with the thrust pin to retain the swivel bracket in the shallow water drive position, means on the swivel bracket and on the support bracket for releasably holding the swivel bracket in the raised position, and selectively operable control means mounted on the swivel bracket and including an operating element or lever adapted to be manually manipulated and operably connected to the reverse lock, operably connected to the shallow water drive link, and operably connected to the swivel bracket holding means for controlling releasable engagement of the thrust pin by the reverse lock and for displacing the shallow water drive link relative to the position affording releasable engagement with the thrust pin, and for controlling releasable holding of the swivel bracket in the raised position by the swivel bracket holding means.

In further accordance with the invention, the operating lever is operable to displace the shallow water drive link independently of any reverse lock movement.

The invention also provides a marine propulsion device comprising a swivel bracket connected to a mounting bracket for pivotal movement therebetween about a tilt axis and relative to a normal running position and upwardly from the normal running position to and beyond a shallow water drive position, said tilt axis being generally horizontal when said mounting bracket is attached to the boat hull, together with a propulsion unit connected to the swivel bracket for pivotal movement therebetween and about an axis extending transversely to said tilt axis to afford steering of said propulsion unit relative to said swivel bracket, a thrust pin carried by the mounting bracket for releasable engagement by the swivel bracket to locate the swivel bracket in the normal running position, a shallow water drive link carried by the swivel bracket for movement relative to a position affording engagement with the thrust pin to releasably hold the swivel bracket in the shallow water drive position, means on the swivel bracket engageable by the shallow water drive link to locate the shallow water drive link in the position affording engagement of the shallow water drive link with the thrust pin, and means for displacing the shallow water drive link relative to the position affording engagement with the thrust pin and including an operating lever movably mounted on the swivel bracket and adapted to be manually actuated, and linkage means directly connecting the operating lever to the shallow water drive link to displace the shallow water drive link to the position affording engagement with the thrust pin in response to movement of the operating lever, said linkage means including means affording list motion between the operating lever and the shallow water drive link.

In further accordance with the invention, the linkage means is independent of a reverse lock and displacement of the shallow water drive link occurs in direct response to operating lever movement resulting from manual manipulation and not in response to reverse lock movement.

Also in accordance with the invention, the shallow water drive link is designed so as to be biased away from the position affording engagement with the thrust pin, either by gravity, by spring bias, or otherwise, and the manually operable linkage overcomes the bias of the drive link away from the position affording engagement with the thrust pin and holds the drive link against a stop on the swivel bracket.

It is a feature of the invention to provide a marine propulsion device, such as an outboard motor, with a single operating lever or element directly controlling each of a reverse lock, a shallow water drive link, and a bracket or member for holding a swivel bracket in the raised position.

Another feature of the invention is the provision of a manually operable linkage for operating a shallow water drive link without employing the components of a reverse lock.

Still another feature of the invention is the provision of a manually operable shallow water drive link operating linkage including a lost motion connection operable, during location of the swivel bracket between the normal operating position and the shallow water drive position, to cock the shallow water drive link for movement to a position for engagement with the thrust pin upon movement of the swivel bracket above the shallow water drive position and operable, during engagement of the shallow water drive link with the thrust pin,

to retain the drive link against a stop on the swivel bracket so as to retain the shallow water drive link in proper position for engagement with the thrust pin.

Other features and advantages of the invention will become known by reference to the following drawings, general description, and claims.

THE DRAWINGS

FIG. 1 is a side elevational view of a marine propulsion device in the form of an outboard motor embodying various of the features of the invention.

FIG. 2 is an enlarged view taken from the front of a portion of the outboard motor shown in FIG. 1.

FIG. 3 is a fragmentary and partially schematic view of a portion of the components of the outboard motor shown in FIG. 1 with the operating lever shown in the "run" position and with the thrust pin engaged by the reverse lock, and with the shallow water drive link held in a storage position by the means biasing the drive link away from the thrust pin.

FIG. 4 is a view similar to FIG. 3, with the operating lever shown in the "tilt" position, with the reverse lock unlatched, and with the shallow water drive link in engagement with the thrust pin to retain the swivel bracket in the shallow water drive position.

Before explaining the invention in detail, it is to be understood that the invention is not limited in its application to the details of the construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also, it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

GENERAL DESCRIPTION

Shown in the drawings is a marine propulsion device which embodies various of the features of the invention and which is in the form of an outboard motor **11** including a clamp or stern or transom or mounting bracket **13** which is adapted to be fixed to the transom **14** or other supporting member of a boat hull. Connected to the transom bracket **13** for vertical swinging movement about a tilt pin **17** is a swivel bracket **19**. Connected to the swivel bracket **19** for common vertical swinging movement and for horizontal swinging movement about a king pin **21** relative to the swivel bracket **19** is a propulsion unit **23** which includes a propeller shaft **27** carrying a propeller **29**.

Also included in the outboard motor **11** is a thrust pin or rod **31** which is selectively supportable in two laterally spaced series of apertures **33** in the stern or transom bracket **13** so as to determine the angle between the transom **14** and the propulsion unit **23** when the propulsion unit **23** is in the normal running or operating position. Because of the pivotal connection about the tilt pin **17**, the propulsion unit **23** and connected swivel bracket **19** are swingable upwardly from the normal operating position to a shallow water drive position, and upwardly beyond the shallow water drive position to an elevated or raised position in which the propulsion unit **23** and connected swivel bracket **19** can be supported against return movement to the normal operating position and to the shallow water drive position and in which the propeller **29** is usually out of the water. In addition, the propulsion unit **23** and connected swivel bracket **19** can normally be swung slightly upwardly beyond the elevated or raised position.

Also included in the outboard motor **11** is a reverse lock **41** (See FIGS. **3** and **4**) which, when engaged, prevents upward swinging of the propulsion unit **23** from the normal operating position to thereby facilitate outboard motor operation in reverse. In the event of the striking of an underwater obstacle when traveling forwardly and, if the impact associated with such striking is sufficient, the reverse lock **41** will automatically release to permit upward swinging of the propulsion unit **23.**

In the illustrated construction, the reverse lock **41** embodies various of the features disclosed in the U.S. Hulsebus Pat. No. Re. 25,048, issued Oct. 3, 1961. While other reverse lock configurations can be employed, in the illustrated construction, the reverse lock **41** includes a pair of arms **43** which are respectively coaxially and pivotally mounted on a pivot or stud **44** on the opposite sides of the swivel bracket **19.** At their forward ends, the arms **43** are connected to a yoke or bale **47** by a pivot pin **49** affording relative pivotal movement therebetween. Pivotal movement of the bale or yoke **47** relative to the pivot pin **49** in the counterclockwise direction as seen in FIGS. **3** and **4** is prevented by respective stops **46** which extend from the pivot arms **43** into engagement with the bale or yoke **47.** The forward portion of the bale or yoke includes hook portions **59** adapted to engage the thrust pin or rod **31** to releasably prevent upward swinging movement of the propulsion unit **23** and connected swivel bracket **19.**

Means are provided for biasing the assembly of the bale **47** and pivot arms **43** in the counterclockwise direction as shown in FIGS. **3** and **4** about the pivot **44** to releasably engage the hook portions **59** with the thrust pin **31.** While other arrangements can be employed, in the illustrated construction, such means comprises one or more relatively heavy main tension springs **61** which are connected, at their lower ends, to the rearward portions of the bale **47** and which, at their upper ends, are anchored to the swivel bracket **19.** The reverse lock **41** is thus biased by the heavy tension or main springs **61** into engaged position with the thrust pin **31** so as to prevent upward movement of the propulsion unit **23** and connected swivel bracket **19** from the normal operating position (See FIG. **3**).

Means are provided for releasably retaining the propulsion unit **23** and connected swivel bracket **19** in the raised or elevated position. While other constructions can be employed, in the illustrated construction, such means comprises (See FIG. **4**) a mechanism including a locking or holding bracket or member **77** which is pivotally mounted on the swivel bracket **19** coaxially with the operating lever still to be described and which includes a slot **79** comprising a generally vertically elongated portion **81** and a projecting portion **83** extending forwardly from the lower end of the vertically elongated slot portion **81.** Also provided in the locking bracket **77** is a detent or tang **87** which projects downwardly into the junction between the vertically elongated slot portion **81** and the forwardly projecting slot portion **83.**

Received within the slot **79** for movement therein is a locking pin **89** which extends fixedly from the transom bracket **13.** When the propulsion unit **23** and connected swivel bracket **19** are in the normal running po-

sition, the locking pin **89** is located at the upper end of the vertically elongated slot portion **81** (See FIG. **3**). When the propulsion unit **23** and connected swivel bracket **19** are retained in the elevated or raised position, the locking pin **89** is located in the projecting slot portion **83** in engagement with the upper edge **90** of the projecting slot portion **83** and forwardly of the downwardly projecting tang **87**.

Movably carried on the swivel bracket **19** is a U-shaped shallow water drive link **101** which is carried for movement relative to a position affording releasable engagement with the thrust pin **31** to retain the swivel bracket **19** in the shallow water drive position. The shallow water drive link **101** includes a web part **103** adapted to engage the thrust pin **31** when the drive link **101** is in the position for engagement with the thrust pin **31** and a pair of spaced legs **105** which extend from the web part **103** and are pivotally mounted on the pivot **44**.

Means are provided on the shallow water drive link **101** and on the swivel bracket **19** for limiting movement of the shallow water drive link **101** in the clockwise direction as shown in FIGS. **3** and **4**, so as to locate the drive link **101** in correct position for engagement with the thrust pin **31** upon movement of the swivel bracket **19** downwardly to the shallow water drive position. While other arrangements could be employed, one or both of the legs **105** includes a tang **107** which extends rearwardly beyond the pivot **44** and is adapted to engage a stop **109** on the swivel bracket **19** so as to limit shallow water drive link movement in the clockwise direction and thereby locate the drive link **101** in the position affording releasable engagement with the thrust pin **31**.

Means are provided for biasing the shallow water drive link **101** in the counterclockwise direction away from the position affording engagement with the thrust pin **31**. Various means can be employed. For instance, the shallow water drive link **101** can be designed or weighted so as to be biased by gravity for movement in the counterclockwise direction as shown in FIGS. **3** and **4**. Preferably, one or more suitably arranged springs can be employed to bias the shallow water drive link **101** in the counterclockwise direction away from the thrust pin **31**. In the illustrated construction, one or more helical springs **111** are mounted coaxially with the pivot **44** and include opposite ends respectively engaged against the swivel bracket **19** and the shallow water drive link **101** to provide the desired bias.

Provided on the swivel bracket **19** is a selectively operable control means including an operating element or lever **121** operably connected to the reverse lock **41**, operably connected to the shallow water drive link **101** independently of the reverse lock **41**, and operably connected to the swivel bracket holding bracket or member **77** for controlling releasable engagement with the thrust pin **31** by the reverse lock **41** and for displacing the shallow water drive link **101** relative to the position affording releasable engagement with the thrust pin **31** and for controlling releasable holding of the swivel bracket **19** in the raised position by the swivel bracket holding member **77**.

More specifically, the operating element or lever **121** is movably mounted on the swivel bracket **19** and is operably connected to each of the reverse lock **41**, the swivel bracket holding member **77**, and the shallow water drive link **101**.

Still more specifically, while other constructions could be employed, in the illustrated construction, the operating lever **121** includes a shaft **123** which is pivotally mounted to the swivel bracket **19** adjacent the top thereof for movement between "run" and "tilt" positions which are angularly spaced from each other at about 135°. The operating lever **121** also includes a handle **124** extending fixedly from the shaft **123**, a pair of spaced arms **125** and **127** extending fixedly from the shaft **123**, and a pair of angularly spaced abutments or shoulders **129** and **131**.

As will be explained hereinafter, the operating lever **121** is biased over center so that the level **121** tends to remain in either the "run" or "tilt" position in the absence of manual manipulation to change its position.

The arm **125** is connected to the reverse lock **41** by a rod **141** so as to release the reverse lock **41** by rotating the bale **47** about the pivot **44** in the clockwise direction, as seen in FIGS. **3** and **4**, and against the action of the main springs **61** in response to movement of the operating lever **121** from the "run" position to the "tilt" position, which movement of the operating lever **121** serves to raise the rod **141**. When the operating lever **121** is in the "tilt" position, the reverse lock **41** is retained in unlatched condition. Upon movement of the operating lever **121** to the "run" position, the rod **141** is lowered to permit repositioning of the reverse lock **41**, under the influence of the main springs **61**, for engagement with the thrust pin **31** upon return of the swivel bracket **19** to the normal running or operating position. When the operating lever **121** is in the "run" position, the reverse lock **41** is retained in position for engagement with the thrust pin **31**.

The arm **125** which is connected to the reverse lock **41** is located so that during movement of the operating lever **121** between the "tilt" and "run" positions, the arm **125** travels over-center, i.e., over the top of the axis of the shaft **123**. The before-mentioned biasing means for retaining the operating lever **121** in either the "tilt" or "run" positions comprises a light spring **143** which is suitably connected, at one end, to the swivel bracket **19** or to a part mounted thereon, as for instance the reverse lock **41**, and which, at its other end, is connected to the reverse lock operating rod **141** so as to continuously urge the rod **141** downwardly and thereby bias the operating lever **121** toward the position in which it is located. Other arrangements could be employed for biasing the operating link over-center. For instance, an arrangement similar to that disclosed can be employed in cooperation with the shallow water drive actuating link which will be mentioned hereinafter. In addition, other means could also be employed.

The angularly spaced shoulders **129** and **131** on the operating lever **121** are operably engageable with a pin **145** on the swivel bracket holding member **77** so that, in response to movement of the operating lever **121** from the "run" position to the "tilt" position, the swivel bracket holding member **77** is cocked for movement in the counterclockwise direction relative to the transom bracket **13**, as shown in FIGS. **3** and **4**, so as to displace the locking pin **89** into the left end of the projecting portion **83** of the slot **79** in the holding member **77** and to thereby retain the swivel bracket holding member **77** in position to releasably retain the swivel bracket **19** in the raised position.

Upon movement of the operating lever **121** from the "tilt" position to the "run" position, the swivel bracket holding member **77** is cocked for movement in the clockwise direction relative to the transom bracket **13,** as shown in FIGS. **3** and **4,** so that, upon elevation of the swivel bracket **19** above the raised position, the holding member **77** will move relative to the locking pin **89** to locate the locking pin **89** in the vertical portion **81** of the slot **79** and thereby to permit lowering of the swivel bracket **19** from the raised position.

The other or second arm **127** of the operating lever **121** is connected to the shallow water drive link **101** by linkage means **147** operable independently of any motion or movement of the reverse lock **41,** i.e., the shallow water drive link **101** is not moved in response to movement of the reverse lock **41,** as in the Ginnow Pat. 3,576,173. In addition, the linkage means **147** includes a lost motion connection. In the illustrated construction, the arm **127** is located so as to continuously move upwardly during movement of the operating lever **121** from the "run" position to the "tilt" position and so as to continuously swing downwardly during movement of the operating lever **121** from the "tilt" position to the "run" position.

The linkage means **147** comprises an actuating link or rod **151** which, at its upper end, is pivotally connected to the arm **127** and which, at its lower end, is either pivotally connected to the shallow water drive link **101** or is guided for movement so as to operatively engage the shallow water drive link **101** to swing the shallow water drive link **101** in the clockwise direction, as shown in FIGS. **3** and **4,** after an initial amount of upward movement.

Various means can be employed for providing the lost motion connection in the linkage means **147** connected to the shallow water drive link **101.** In the illustrated construction, the lost motion connection is provided by forming the shallow water drive link actuating rod **151** with an integral spring portion **153** which is extendible in the event the shallow water drive link **101** is prevented from moving in common with the upper end of the link **151** in response to manual manipulation of the operating lever **121** by the operator. Thus, when the operating lever **121** is moved from the "run" position to the "tilt" position, upward swinging of the arm **127** causes upward movement of the actuating rod **151** which causes the shallow water drive link **101** to swing in the clockwise direction about the pivot **44** and against the action of the spring **111.** Such shallow water drive link movement will cause, prior to full movement of the operating lever **121** to the "tilt" position, engagement of the legs **105** of the shallow water drive link **101** with the bottom of the thrust pin **31** when the swivel bracket **19** is in the normal running position. Under such circumstances, the spring portion **153** of the actuating rod **151** will expand to permit complete movement of the operating lever **121** to the "tilt" position. The tension imparted into the spring portion **153** of the actuating rod **151** is less than the action of the light spring **143** biasing the operating lever **121,** and, accordingly, the biasing action to which the operating lever **121** is subject, is not materially adversely affected by extension of the spring portion **153** of the shallow water drive actuating rod **151.**

After the operating lever **121** is in the "tilt" position, the swivel bracket **19** can be swung upwardly and the tension in the spring portion **153** of the shallow water drive actuating rod **151** causes the shallow water drive link **101** to remain in engagement with the thrust pin **31** during initial movement of the swivel bracket **19** upwardly and away from the thrust pin **31.** When the swivel bracket **19** is raised beyond the shallow water operating position, the shallow water drive link **101** rides off the thrust pin **31** and the tension in the spring portion of the shallow water drive actuating rod **151** serves to further displace the shallow water drive link **101** in the clockwise direction until engagement of the stop **109** on the swivel bracket **19** by the tang or tangs **107** to locate the shallow water drive link **101** in the position affording engagement with the thrust pin **31.** Upon lowering of the swivel bracket **19** to the shallow water drive position, the shallow water drive link **101** will engage the thrust pin **31** to releasably retain the swivel bracket **19** in the shallow water drive position.

When the operating lever **121** is thereafter moved from the "tilt" to the "run" position, the shallow water drive actuating rod **151** is lowered, permitting the spring or springs **111** to displace the shallow water drive link **101** relative to the swivel bracket **19** to the position shown in FIG. **3.** Accordingly, upon subsequent lowering of the swivel bracket **19,** the shallow water drive link **101** will be retained clear of and below the thrust pin **31.** Movement of the operating lever **121** from the "tilt" to the "run" position, as already explained, also simultaneously permits location of the reverse lock **41** for engagement with the thrust pin **31** upon return of the swivel bracket **19** to the normal running position.

If the swivel bracket **19** is raised beyond the shallow water drive position to the raised position after movement of the operating lever **121** to the "tilt" position, and it is desired to subsequently locate the swivel bracket **19** in the shallow water drive position, the operating lever **121** is then returned to the "run" position, the swivel bracket **19** is then returned to the normal operating position, the operating lever **121** is then returned to the "tilt" position, and the swivel bracket **19** is then raised at least somewhat beyond the shallow water drive position and then lowered to engage the shallow water drive link **101** with the thrust pin **31.**

Thus, there is disclosed an operating lever **121** which is capable of providing coordinated operation of each of the reverse lock **41,** the shallow water drive link **101,** and a swivel bracket holding member **77.** Furthermore, the operating lever **121** is located on the swivel bracket **19** in position for easy access and serves to locate the various components for operation in response to swinging movement of the swivel bracket. The connection of the operating lever **121** to the shallow water drive link **101** is operable independently of any movement of the reverse lock **41** and would be operable in the absence of the reverse lock **41.**

Various of the aspects of the invention are set forth in the following claims.

I claim:

1. A marine propulsion device comprising a support bracket adapted to be attached to a boat hull, a thrust pin carried by said support bracket, a swivel bracket, means connecting said swivel bracket and said support bracket for pivotal movement therebetween relative to a normal operating swivel bracket position, a raised swivel bracket position, and a shallow water drive position located intermediate the normal operating position

and the raised position, a reverse lock movably mounted on said swivel bracket for releasable engagement with said thrust pin to retain said swivel bracket in the normal operating position, a shallow water drive link mounted on said swivel bracket for movement relative to a position for releasable engagement with said thrust pin to retain said swivel bracket in the shallow water drive position, means on said swivel bracket and on said support bracket for releasably holding said swivel bracket in the raised position, and selectively operable control means mounted on said swivel bracket and including an element operably connected to said reverse lock, operably connected to said shallow water drive link, and operably connected to said swivel bracket holding means for controlling releasable engagement of said thrust pin by said reverse lock and for displacing said shallow water drive link relative to said position affording releasable engagement with said thrust pin, and for controlling releasable holding of said swivel bracket in the raised position by said swivel bracket holding means.

2. A marine propulsion device in accordance with claim **1** wherein said reverse lock is movable relative to a position affording engagement with said thrust pin and wherein said element is operable to displace said shallow water drive link independently of movement of said reverse lock relative to said reverse lock position.

3. A marine propulsion device in accordance with claim **1** wherein said control means includes means on said element operably engageable with said swivel bracket holding means, means on said element connected to said reverse lock, and means on said element connected to said shallow water drive link independently of said means operably engageable with said swivel bracket holding means and independently of said means connected to said reverse lock.

4. A marine propulsion device in accordance with claim **3** wherein said means connected to said shallow water drive link comprises linkage means directly connecting said element and said shallow water drive link for displacing said shallow water drive link to said position affording engagement with said thrust pin in response to movement of said operating lever, said linkage means including means affording lost motion between said element and said shallow water drive link.

5. A marine propulsion device in accordance with claim **3** wherein said reverse lock is movable relative to a position affording engagement with said thrust pin and wherein said means connected to said shallow water drive link comprises linkage means directly connecting said element to said shallow water drive link for displacing said shallow water drive link to said position affording engagement with said thrust pin in response to movement of said element and independently of movement of said reverse lock, said linkage means including means affording lost motion between said element and said shallow water drive link.

6. A marine propulsion device comprising a mounting bracket adapted to be attached to a boat hull, a swivel bracket connected to said mounting bracket for pivotal movement therebetween about a tilt axis and relative to a normal running position and upwardly from the normal running position to and beyond a shallow water drive position, said tilt axis being generally horizontal when said mounting bracket is attached to the boat hull, a propulsion unit connected to said swivel bracket for pivotal movement therebetween and about an axis extending transversely to said tilt axis to afford steering of said propulsion unit relative to said swivel bracket, a thrust pin carried by said mounting bracket for releasable engagement by said swivel bracket to locate said swivel bracket in the normal running position, a shallow water drive link carried by said swivel bracket for movement relative to a position affording engagement with said thrust pin to releasably hold said swivel bracket in the shallow water drive position, means on said swivel bracket engageable by said shallow water drive link to locate said shallow water drive link in said position affording engagement of said shallow water drive link with said thrust pin, and means for displacing said shallow water drive link relative to said position affording engagement with said thrust pin and including an operating lever movably mounted on said swivel bracket and adapted to be manually actuated, linkage means directly connecting said operating lever to said shallow water drive link for displacing said shallow water drive link to said position affording engagement with said thrust pin in response to movement of said operating lever, said linkage means including means affording lost motion between said operating lever and said shallow water drive link.

7. A marine propulsion device in accordance with claim **6** and further including a reverse lock movably mounted on said swivel bracket for releasable engagement with said thrust pin to releasably hold said swivel bracket in the normal running position and wherein said linkage means is operable to displace said shallow water drive link independently of movement of said reverse lock.

8. A marine propulsion device in accordance with claim **6** wherein said linkage means includes a link and wherein said means affording lost motion comprises a spring portion included in said link.

9. A marine propulsion device in accordance with claim **6** wherein said means affording lost motion comprises manually actuatable spring means.

10. A marine propulsion device comprising a support bracket adapted to be attached to a boat hull, a thrust pin carried by said support bracket, a swivel bracket, means connecting said swivel bracket and said support bracket for pivotal movement therebetween relative to a normal operating swivel bracket position and a shallow water drive position raised relative to the normal operating position, a reverse lock movably mounted on said swivel bracket for releasable engagement with said thrust pin to retain said swivel bracket in the normal operating position, a shallow water drive link mounted on said swivel bracket for movement relative to a position for releasable engagement with said thrust pin to retain said swivel bracket in the shallow water drive position, and selectively operable control means mounted on said swivel bracket and including an element operably connected to said reverse lock, and operably connected to said shallow water drive link for controlling releasable engagement of said thrust pin by said reverse lock and for displacing said shallow water drive link relative to said position affording releasable engagement with said thrust pin.

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