June 14, 1960 J. E. SCOTT 2,940,207

TROLLING DEVICE

Filed June 25, 1957 2 Sheets-Sheet 1

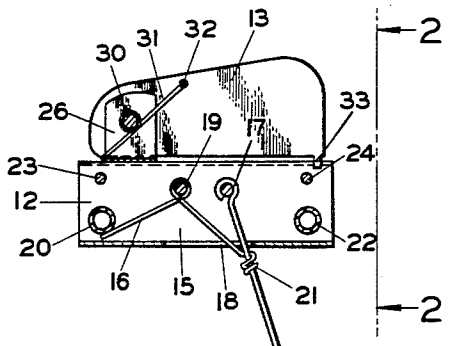


FIG. 1

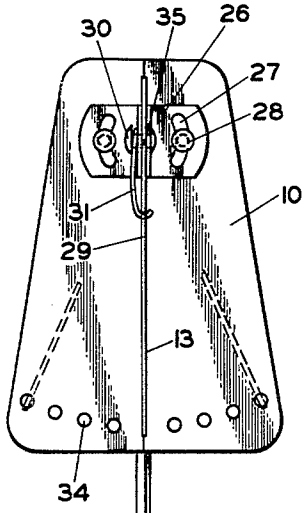


FIG. 3

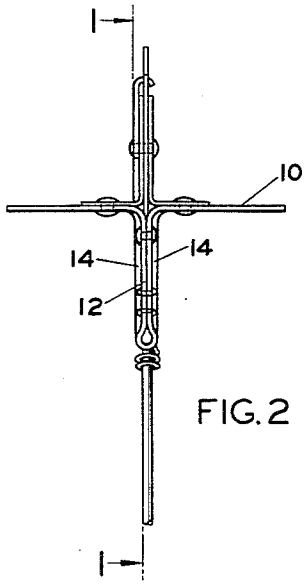
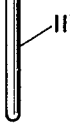


FIG. 2





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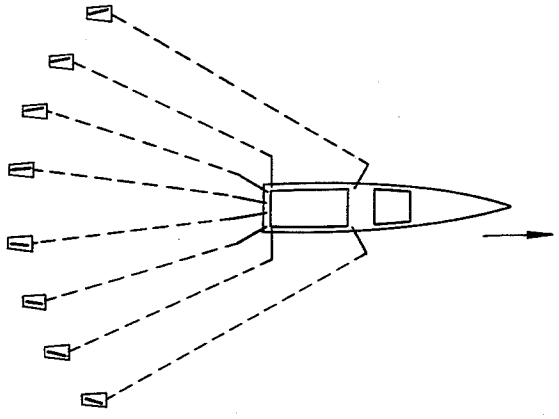


FIG. 4

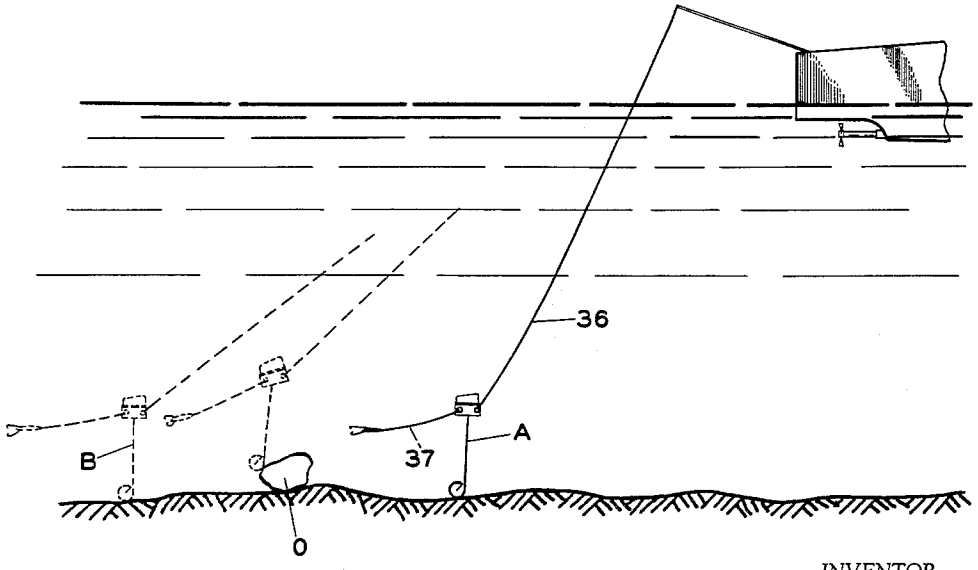


FIG. 5

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TROLLING DEVICE

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4 Claims. (Cl. 43—43.13)

My invention relates to a trolling device. It has to do, more particularly, with a trolling device which is adapted to be used in controlling the position of natural or artificial bait, used in trolling, relative to the bottom of the stream, lake, ocean, or other body of water on which a boat pulling the device is operating. The trolling device of this invention further provides means for maintaining it in a predetermined angular position relative to the stern of the boat pulling it so that a number of these devices may be trailed from the boat without interference with each other.

According to my invention, I provide a trolling device which, when attached to a line or rod and reel and deposited in the water and is pulled along by a line from the stern of the boat at a suitable trolling speed, automatically finds the bottom of the body of water and automatically sets its level of operation so that the bait or lure will always be a predetermined distance from the bottom. This permits the lure, spinner, or live bait, to clear the bottom, thus avoiding snags as well as to be at a level for most effective fishing. This is the normal operating position of the device and is determined by the momentum and pressure of water on the device as it is pulled along by the boat because the device simulates the operation of a hydrofoil. However, the device is further designed so that upon striking a rock or other object or obstruction on the bottom, it automatically is directed upwardly to clear the obstruction and then immediately thereafter levels off to its original position relative to the bottom. Furthermore, the device is equipped with means which simulates the operation of a rudder for maintaining it in a predetermined angular relationship relative to the stern of the boat. Consequently, several of these devices may be trailed from the stern of the boat at different angular positions without interfering with each other.

In the accompanying drawings, I have illustrated the preferred embodiment of my invention. In these drawings:

Figure 1 is a view partly in side elevation and partly in vertical section taken substantially along line 1—1 of Figure 2.

Figure 2 is a forward end view of the device taken along line 2—2 of Figure 1.

Figure 3 is a plan view of the device.

Figure 4 is a diagrammatic view illustrating the action of the adjustable rudder arrangement of the device.

Figure 5 is a diagrammatic view illustrating the action of the hydrofoil arrangement of the device.

With particular reference to the drawings, in Figures 1 to 3 I have illustrated the structure of my trolling device whereas in Figures 4 and 5 I have illustrated the action of the device.

In Figure 1, I have illustrated my device as consisting mainly of the horizontally disposed hydrofoil sections 10, which have associated therewith a level control trigger 11 depending from and associated with a fixed depending stabilizing section 12, together with an upstanding adjustable rudder section 13 extending upwardly from the foil sections 10.

The device is preferably formed of relatively thin and lightweight sheet metal. The hydrofoil sections 10 and the depending stabilizing section 12 are formed from one piece of metal. This piece of metal is bent upwardly into substantially U-form to provide the upstanding wall 14 closely adjacent each other, as shown in Figure 2. Then the metal is bent horizontally in opposite directions to provide the oppositely extending horizontally disposed foil sections 10.

Intermediate their ends, the wall sections 14 are spaced apart to provide a chamber 15 in which the upper end of the trigger 11 is disposed along with a spring 16. The upper end of the trigger 11 is pivoted at 17, intermediate the length of the stabilizer section 12, and is adapted to swing in a slot 18 formed in the bottom edge of the chamber. The spring 16 is in the form of a wire which is wrapped around a transverse pin 19 in the chamber 15. The rear leg of this spring bears against a metal eyelet 20 while its forward leg is wrapped around the trigger 11, as indicated at 21, a substantial distance below the pivot pin 17. This spring 16 normally tends to swing the trigger 11 forwardly against the forward edge of the slot 18, as shown in Figure 1. At the forward end of the stabilizer section 12 another metal eyelet 22 is provided. These eyelets 20 and 22, along with rivets 23 and 24, serve to secure the stabilizer walls 14 together at their converging ends. The lower end of the trigger 11 is curled into a circular loop 25 to provide for increased weight and a vertically disposed stabilizing portion.

As previously indicated, the adjustable rudder 13 is also provided. This rudder 13 is in the form of a vertically disposed thin metal section which is pivoted for horizontal swinging relative to the hydrofoil sections 10. The pivoting is provided by a pair of pivot lugs 26 disposed at the rear end of the hydrofoil sections 10. Each of these lugs is provided with a horizontal part having an arcuate slots 27. The slots are concentric with each other at the point 35. The slots receive rivets 28 which are provided in the sections 10 adjacent their rear ends and on opposite sides of the joint 29 between the sections 10. The rudder 13 is also pivoted for slight vertical movement between the upstanding clips 26 by means of a transverse pivot pin 30 passing through the vertical portions of the clips. To normally hold the forward end of the rudder 13 downwardly, a spring 31 is provided which is in the form of a wire wrapped around the pivot 30 and having its lower and rear end engaging the rear edge of one of the lugs 26. The forward and upper end of the spring 31 is turned transversely into an opening 32 in the member 13 which is spaced forwardly and upwardly of the pivot pin 30.

Thus, the spring 31 tends to swing the rudder 13 downwardly and normally keeps it positioned in the joint 29 between the hydrofoil sections 10. The forward and lower edge of the rudder 13 is provided with a depending locating lug 33. This lug will also extend down into the joint 29 when the rudder 13 is centrally positioned, as shown in Figure 3. At the forward edge of each of the hydrofoil sections 10, a plurality of rudder setting openings 34 are provided. These rudder setting openings are arranged in an arc concentric with the point 35 about which the rudder 13 will pivot in a horizontal direction. By means of these openings 34 and the depending locating lug 33, the rudder 13 may be set at any selected angle, as illustrated by the broken lines in Figure 3. It is merely necessary to lift the forward end of the rudder 13 against the action of the spring 31 to withdraw the lug 33 upwardly from the joint 29 or any of the openings 34, and then set the lug in any other open-

ing 34 or the joint 29. The spring 31 will maintain the rudder 13 downwardly in the set position.

In the use of this device, the device will be pulled along by a trolling line 36, as shown in Figure 5, which will be attached to the device through the forward eyelet 22. The trailing leader 37 for the bait will be attached to the device by means of the rear eyelet 20. As the boat pulls the device along, the trigger 11 will swing rearwardly in the slot 18 to an almost vertical position, as shown at A in Figure 5. This will be the normal operating position of the trigger and the hydrofoils 10 will, therefore, be positioned horizontally in the water. The member 25 will drag along the bottom and will keep the trolling device at a predetermined level, depending on the length of the trigger 11. If an obstruction is encountered by the trigger 11, as at O in Figure 5, the trigger 11 will swing farther rearwardly in the slot 18 and this will direct the hydrofoils 10 at an upward angle. Consequently, the trolling device will rise and will clear the obstruction. As soon as the obstruction is cleared, the trigger 11 will move forwardly slightly in the slot 18 to the normal intermediate position, as shown at B in Figure 5. The trolling device will now operate at its predetermined level since the hydrofoils 10 will be horizontally disposed.

The adjustable rudder 13 will be set to determine the position of the trolling device relative to the stern of the boat, as indicated in Figure 4. If only one of my trolling devices is being pulled along by the boat, the rudder 13 will be permitted to occupy the central or straightforward position shown in Figure 3, with the locating lug 33 thereof extending down into the joint 29. However, if several of my trolling devices are to be pulled along by the boat, each one will have the rudder 13 set in a different angular position. The rudder 13 of each device can be set in the proper angular position by inserting the lug 33 in the proper opening 34. Also it can be set in its outermost positions by dropping the lug 33 over either of the outer edges of the hydrofoil sections, each slot 27 limiting this outermost position. With the rudder 13 set at a proper angle, the trolling device will operate in a predetermined angular position at the stern of the boat, as indicated by the various rudder settings in Figure 4. Thus, a number of devices can be trailed from the stern of a boat without interfering with each other.

It will be apparent from the above description that I have provided a simple and inexpensive trolling device having many desirable features. Important advantages are obtained from the fact that the device is designed to operate at a predetermined level above the bottom of the body of water being fished so that the hooks and lures will not become snagged on the bottom, and the device is designed to be very stable insofar as roll is concerned, due to the depending stabilizer and the trigger. The device is so arranged that it will clear obstructions on the bottom, instead of snagging thereon, by an automatic upward movement and will then automatically level off to its original position. Other important advantages are obtained by the adjustable rudder, since it provides for the use of a plurality of the trolling devices at the stern of a boat and all of the different devices will drift at a predetermined angular position relative to the stern so that they will not interfere or snag with each other. Also, the stabilizing arrangement provides for proper functioning of the rudder to hold the devices in predetermined angular positions.

Various other advantages will be apparent.

According to the provisions of the patent statutes, the principles of this invention have been explained and have been illustrated and described in what is now considered to represent the best embodiment. However, it is to be understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

Having thus described my invention, what I claim is:

1. A trolling device comprising a horizontal hydrofoil having a depending vertical stabilizer and an associated depending elongated trigger arm adapted to slide along the bottom of a body of water in which the device is submerged and to hold the hydrofoil at a predetermined level and position during trolling by pulling the device along from a boat, a vertically disposed rudder upstanding from the hydrofoil and adjustable horizontally relative thereto to determine the angular position of the device relative to the boat pulling the device, said trigger arm being pivoted to the stabilizer and being normally swung forwardly by a spring connected between the arm and the stabilizer, said stabilizer comprising spaced depending walls between which the trigger is pivoted having stops for limiting the forward and rearward positions of the trigger, said hydrofoil having oppositely projecting horizontal sections on opposite sides of the vertically disposed depending stabilizer, said upstanding rudder being pivoted on a vertical pivot in the plane of the stabilizer between the hydrofoil sections and swingable over the upper surface thereof, and retaining means for holding said rudder in a selected position, said retaining means comprising a depending lug on the rudder which cooperates with locating sockets across the hydrofoils.

2. A trolling device according to claim 1 in which the rudder is also pivoted to the hydrofoil by a horizontal transverse pivot for movement in a vertical plane relative to the hydrofoil, and a spring connected between the rudder and the hydrofoil tending to swing the rudder downwardly to cause the retaining lug to extend into any of said sockets.

3. A trolling device according to claim 2 in which the said sockets comprise a central socket formed by a joint between the oppositely extending hydrofoils and openings formed in said hydrofoils at opposite sides of said joint and concentric with the vertical pivot axis of said rudder.

4. A trolling device according to claim 2 in which the stabilizer is provided with means for connecting lines to the forward and rearward ends thereof.

References Cited in the file of this patent

UNITED STATES PATENTS

1,312,656	Wiebe	Aug. 12, 1919
1,320,804	Squarebriggs	Nov. 4, 1919
1,361,602	Marks	Dec. 7, 1920
1,673,701	Lindstrom	June 12, 1928
2,467,971	Frair	Apr. 19, 1949
2,472,639	Wickens	June 7, 1949
2,542,347	Muller	Feb. 20, 1951
2,648,929	Dunn	Aug. 18, 1953
2,787,077	Keiter	Apr. 2, 1957
2,823,635	Hagemann	Feb. 18, 1958