Oct. 10, 1961 G. W. PATTERSON 3,003,457

MANUALLY PROPELLED BOAT

Filed July 1, 1960 2 Sheets-Sheet 1

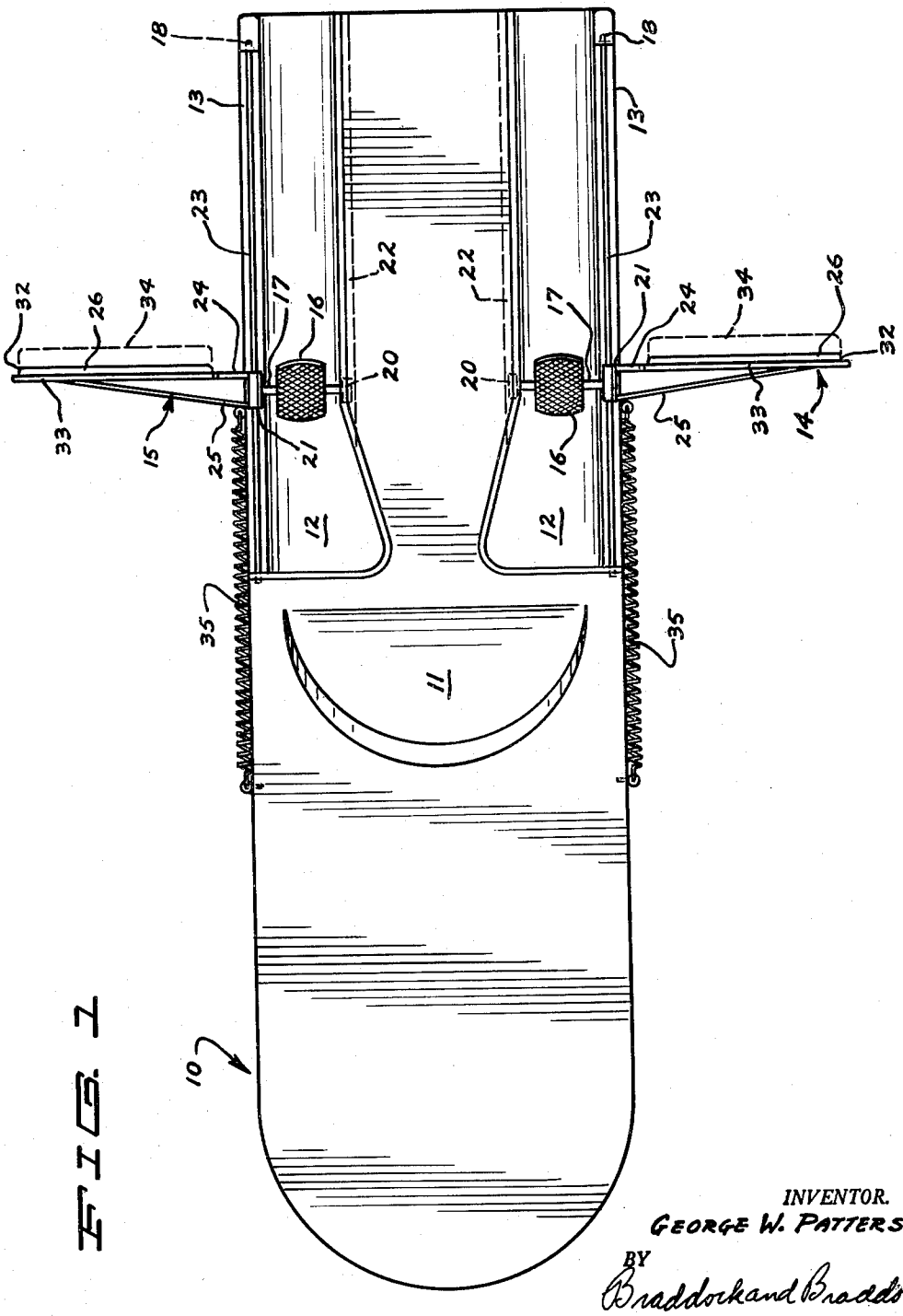


FIG. 1

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FIG. 2

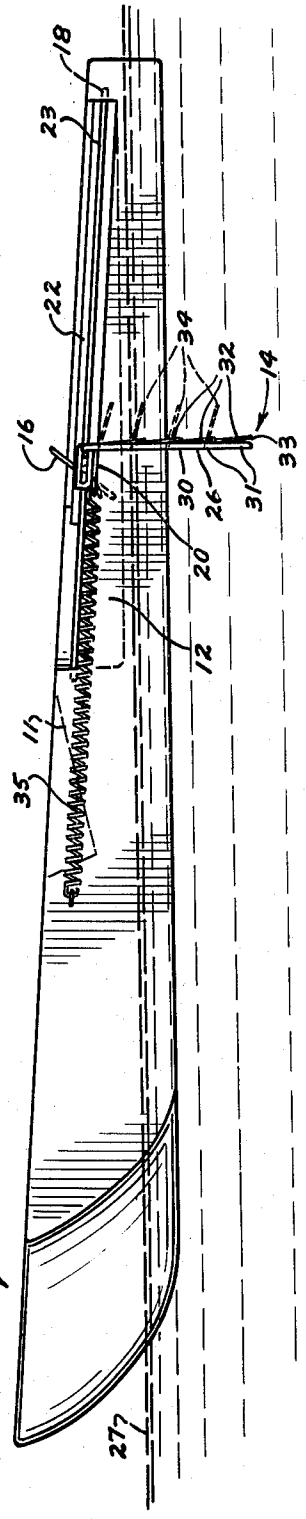
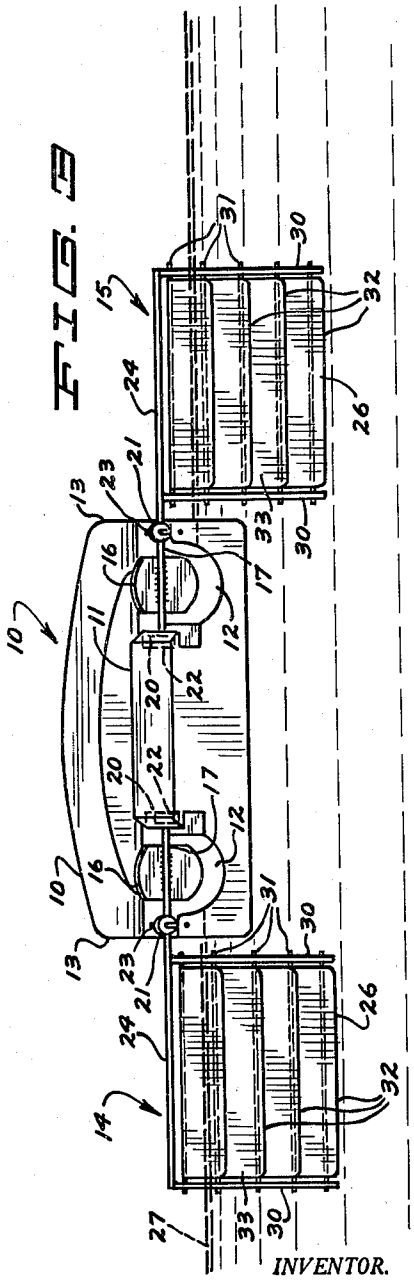


FIG. 3



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MANUALLY PROPELLED BOAT

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The invention herein relates to a new and improved boat in combination with a novel means to effect manual propulsion thereof.

Interest in boating has grown greatly in recent years. Novel watercraft are eagerly awaited and readily accepted by the public. The invention herein presents a new type watercraft that can be propelled by the power of the occupant's legs and feet leaving the hands free to fish or do other activities while the boat is moving.

In a boat of the present invention, each foot is independently associated with a separate transverse paddle in such a manner that a leg thrust will cause the paddle to be propelled rearwardly with respect to the boat. A resilient means causes the paddle to be returned toward the bow of the boat as the foot is retracted. Each paddle is independent from the other; thus permitting easy maneuverability. Fins of each paddle are pivoted to "feather" during forward movement thereof with respect to the boat.

The entire propelling means can be easily disassembled from the hull of the boat to facilitate easy transportation of the boat out of the water without damage to the various parts.

It is an object of the present invention to present a pleasure craft that is compact and has a novel, easily removed propelling means, for rapid, facile, safe movement through the water.

In the drawings,

FIG. 1 is a top plan view of a boat made according to the present invention;

FIG. 2 is a side elevational view of the device of FIG. 1 as viewed from the port side thereof; and

FIG. 3 is a rear elevational view of the device of FIG. 1.

Referring to the drawings and numerals of reference thereon, a one man boat **10** has a rearwardly facing operator's seat **11** and a pair of longitudinally extending recesses **12, 12** located rearwardly from seat **11** adjacent each of the outer edges **13, 13** of boat **10**. A port paddle **14** and a starboard paddle **15** are located rearwardly from seat **11** and extend outwardly from the edges **13, 13** of the boat. The paddles are identically constructed except one is for the port side and one is for the starboard side of the boat. The identical parts of each paddle are identically numbered.

The port paddle **14** and the starboard paddle **15** each have a foot pedal **16** fixedly attached to a cross rod **17** which has a guide block constituted as a roller **20** in the present form, attached to an inner end thereof and is fixedly attached to a tubular guide **21** at its outer end. Foot pedal **16** is located above recess **12** to allow freedom of movement of an operator's foot. Roller **20** is rotatably fitted within a longitudinally extending guide slot **22** formed in an inner wall of recess **12**.

Tubular guide **21** is slidably fitted over a longitudinally extending guide rod **23** located adjacent each outer edge **13**. Guide rod **23** is mounted in a slot **18** adjacent a rear end of boat **10**. Slot **18** provides for removal of the guide rod and easy installation or removal of the paddle unit.

A paddle support rod **24** is fixedly attached to guide **21** adjacent a rear end thereof and extends laterally outward therefrom. A brace **25** is attached to an outer end of paddle support **24** and to guide **21** adjacent a first end thereof. A vane unit **26** extends downwardly from paddle support **24** sufficiently to engage the water surface, represented by dotted lines as at **27**.

Vane unit **26** includes a pair of downwardly extending, substantially parallel legs **30, 30** that pivotally support a plurality of rods **31**, each of which has a vane **32** attached to it. The vanes **32** are of dimension to overlap when in a first propelling position as at **33** and are free to pivot rearwardly to a second feathered position illustrated by dotted lines as at **34**. A tension spring **35** is attached to each of the paddles and resiliently urges the paddle forwardly.

To operate the boat, a person sits on seat **11** and places his feet on foot pedals **16** in a first forward position. He then pushes the foot pedal to a second rearward position which in turn moves the paddle rearwardly. The force of gravity and of the water places vanes **32** in first position **33** and presents a substantially solid face acting against the water. The reaction of the force applied by the operator is transmitted through his body and forces the boat ahead. The operator then releases his foot pressure and spring **35** returns the paddle to its forward position. During the return stroke vanes **32** pivot rearwardly to second position **34** and present very little drag or resistance to movement through the water.

The paddles may be moved individually or in unison. To turn the boat one paddle may be used individually, resulting in a turn toward the side of the boat opposite from the paddle used. The roller and guide rod keep the paddle assembly from cocking and make operation smooth and positive.

What is claimed is:

1. A boat including a longitudinally extending hull having a passenger seat, a pair of slots in an upper surface of said body each adjacent opposite longitudinal edges of said hull, longitudinally extending guide rods mounted on said hull at forward ends thereof and removably mounted in said slots at rear ends thereof, a tubular guide slidably mounted over each of said guide rods, a pair of longitudinally slidable guide blocks mounted on said hull each spaced inwardly from one of said guide rods and being slidable substantially parallel to said guide rods, a pair of cross rods each fixedly attached at a first end thereof to one of said guide blocks and fixedly attached to one of said tubular guides outwardly adjacent said guide block at a second end thereof, a foot pedal attached to each of said cross rods, said cross rod being movable between a first forward position and a second rearward position, a paddle support bar fixedly attached to each of said tubular guides and extending laterally outward therefrom, and a downwardly extending paddle attached to each of said support rods.

2. The combination as specified in claim 1 wherein said paddles each includes a pair of downwardly extending, spaced, substantially parallel legs, a plurality of vertically spaced rods pivotally mounted to said legs, and a fin fixedly attached to each of said rods and extending between said legs said fins being of dimension to overlap one another when said paddle is moved rearwardly and free to pivot to a substantially parallel horizontal position when said paddle is moved forwardly.

3. The combination as specified in claim 2 and resilient means urging each of said paddles to a forward position.

4. A boat including a longitudinally extending hull having a passenger seat, a longitudinally extending guide rod removably mounted on said hull adjacent opposite longitudinal edges of said hull, a guide slidably mounted over each of said guide rods, a pair of guide blocks longitudinally slidably mounted on said hull each spaced inwardly from one of said guide rods and being slidable substantially parallel to said guide rods, a pair of cross rods each fixedly attached at a first end thereof to one of said guide blocks and fixedly attached to one of said

guides outwardly adajacent said guide blocks at a second end thereof, a foot pedal attached to each of said cross rods, said cross rod being movable between a first forward position and a second rearward position, a paddle support bar fixedly attached to each of said tubular guides and extending laterally outward therefrom, a downwardly extending paddle attached to each of said support rods, and

resilient means urging each of said paddles to a forward position.

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