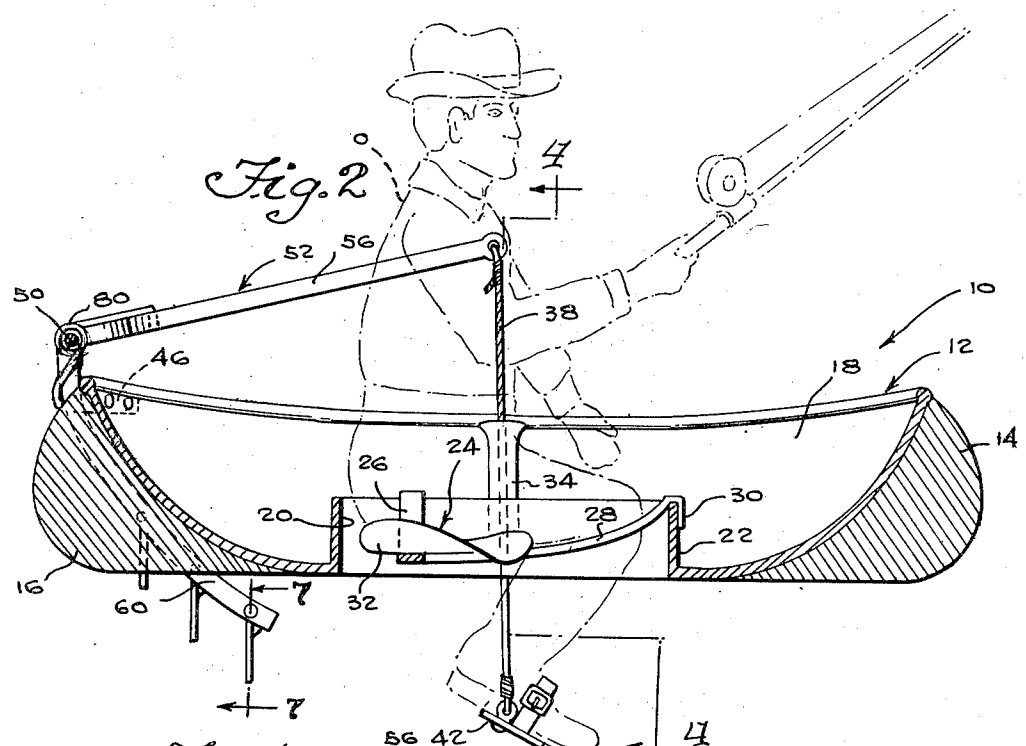
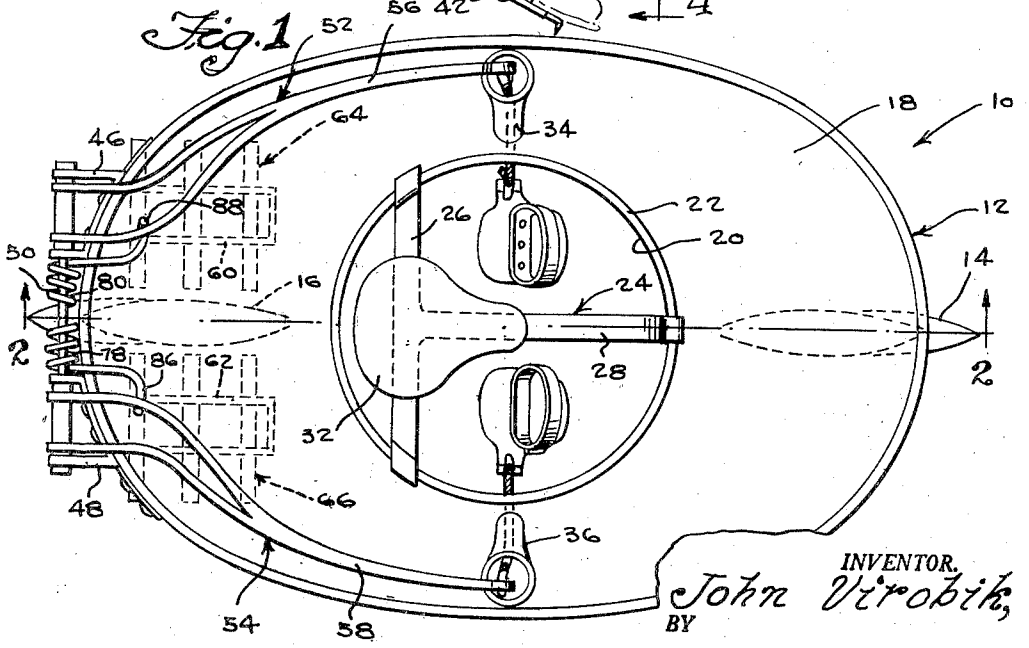
Aug. 27, 1957 J. VIROBIK 2,803,837

SPORTSMAN'S BOAT

Filed Aug. 10, 1956 2 Sheets-Sheet 1





INVENTOR.
John Virobik,
BY
McMorrow, Berman + Davidson
ATTORNEYS

Aug. 27, 1957 J. VIROBIK 2,803,837

SPORTSMAN'S BOAT

Filed Aug. 10, 1956 2 Sheets-Sheet 2

Fig. 3

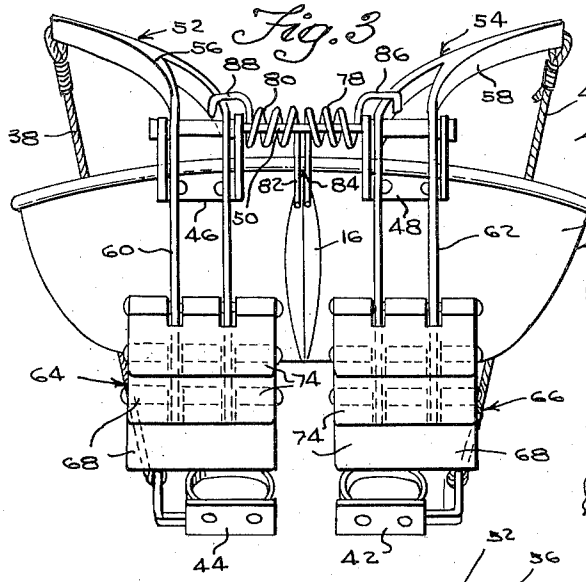


Fig. 5

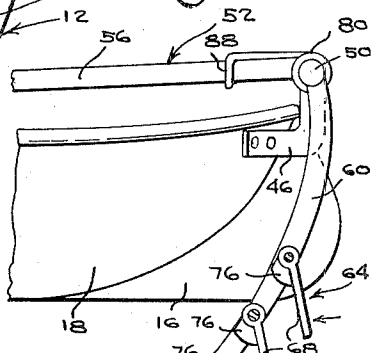


Fig. 4

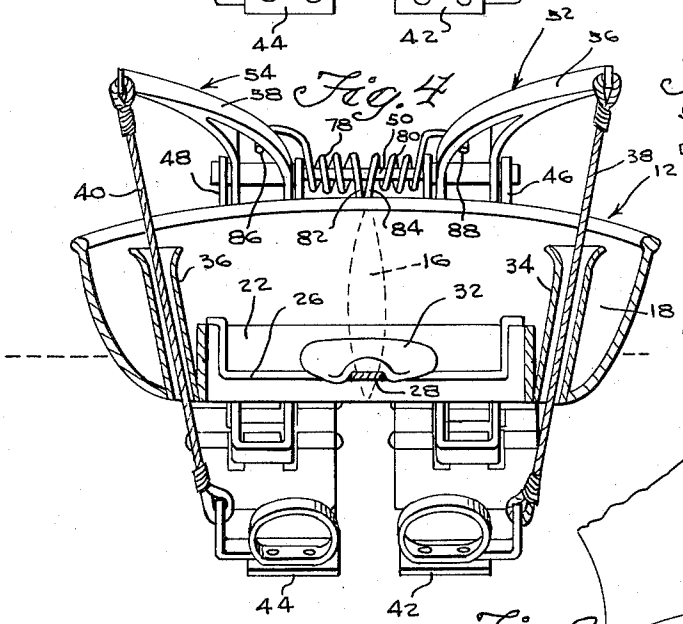


Fig. 6

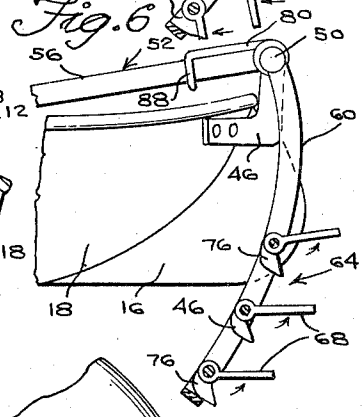


Fig. 8

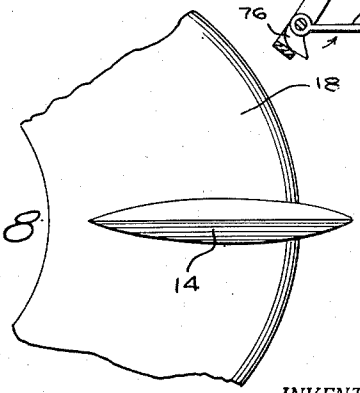
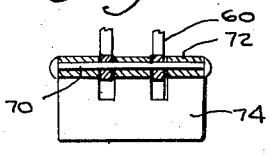


Fig. 7



INVENTOR.
John Virobik,
BY

McMorrow, Berman & Davidson
ATTORNEYS

United States Patent Office 2,803,837 Patented Aug. 27, 1957

2,803,837

SPORTSMAN'S BOAT

John Virobik, Centralia, Ill.

Application August 10, 1956, Serial No. 603,306

3 Claims. (Cl. 9—5)

This invention relates generally to water craft, and is more particularly concerned with small boats of the type generally used by sportsmen for the purpose of hunting or fishing, for example.

Generally speaking boats of the type involved comprise a buoyant hull capable of carrying a single occupant and his necessary hunting or fishing gear, the occupant's legs extend through the bottom of the boat hull and supply the necessary propelling force for said hull. Generally speaking the occupant will have disposed on his lower extremities waders or suitable water proof leggings, and it is generally desirable to incorporate means whereby the boat hull may be propelled through movement of the legs of the occupant leaving his hands free for manipulating a fish pole or gun, for example.

A primary object of invention in conformance with that set forth is to provide a novel sportsman's boat incorporating a hull wherein an occupant of the same may be seated with his legs disposed out of a central opening in the bottom of the hull and including a foot actuated propulsion means leaving the occupant's arms and hands free for the purpose of participating in the sport involved.

Another object of invention in conformance with that set forth is to provide a novel sportsman's boat of the character involved wherein the foot actuated propulsion assembly includes operating means depending from opposite sides of the central opening in the bottom of a boat hull for engagement with an occupant's feet and further including force transmitting means depending from the stern of the boat in operative engagement with the operating means wherein said hull may be propelled in a ready and expeditious manner in both a straight course as well as for the purpose of turning the same.

And yet a still further object of invention in conformance with that set forth is to provide a novel sportsman's boat of the character involved which is readily and economically manufactured, easily used and maintained, and highly satisfactory, practical and acceptable for the purpose intended.

These together with other objects and advantages which will subsequently become 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:

Figure 1 is a top plan view of the novel boat;

Figure 2 is a sectional view taken substantially on line 2—2 of Figure 1, showing in phantom lines the relative position of an occupant of the boat;

Figure 3 is a rear elevational view of the novel boat;

Figure 4 is a sectional view taken substantially on line 4—4 of Figure 2;

Figure 5 is a fragmentary rear elevational view showing the relative position of cooperating parts during a propulsion stroke of the foot actuated propulsion assembly of the boat;

Figure 6 is a view similar to Figure 5, showing the relative position of the cooperating parts after a propulsion stroke has been accomplished;

Figure 7 is a fragmentary sectional view taken substantially on line 7—7 of Figure 2; and

Figure 8 is a fragmentary bottom plan view of the forward end portion of the hull of the boat of the invention.

Referring to the drawings in detail, the novel boat is indicated generally at 10 and includes a substantially eliptical shaped buoyant hull 12 constructed from any suitable material, said hull having depending from forward and aft portions thereof on the longitudinal axis suitably secured forward and rear keel portions 14 and 16. The hull 12 includes in the body portion 18 a central apertured portion 20 having extending about its periphery an upwardly extending flange portion 22 which has removably disposed thereon a seat assembly indicated generally at 24.

The seat assembly 24 comprises a pair of suitably secured right angularly related support bars 26 and 28 which terminate at their end portions in downwardly opening reverse bend portions 30, see Figure 2, extensible over the flange 22 previously mentioned. Suitably secured at the intersection of the support bars 26 and 28 is a suitable seat 32 upon which the occupant O is seated during use of the sportsman's boat.

The boat hull is of a relatively shallow draft, and accordingly requires very little water to float the same, and it is to be understood that the flange portion 22 about the central aperture 20 may be made of any suitable height to prevent the entrance of water into the boat hull. Furthermore, to facilitate maneuvering of the boat in relatively shallow water the boots of the occupant of the boat may be provided with cleats thereon as clearly shown in Figure 2.

Opening through the bottom of the boat hull on opposite sides of the central opening 20 are a pair of vertically extending suitably secured guide sleeves 34 and 36 which may be angularly directed toward the longitudinal axis of the boat hull, see Figure 4, for example, said sleeves having extending therethrough flexible force transmitting cables 38 and 40, respectively, of any suitable material, each of which having suitably secured to the lower end thereof a suitable stirrup member 42 and 44, respectively, through which the feet of an occupant will extend.

A pair of upwardly extending support brackets 46 and 48, see Figure 3, are suitably secured in spaced relationship on the outer surface of the stern of the boat hull and have extending transversely therebetween a transversely disposed support shaft 50, said shaft having journaled at opposite ends thereof elongated force transmitting levers indicated generally at 52 and 54 which respectively include a forwardly extending lever portion 56 and 58 extending toward the opposite sides of the boat hull and terminating substantially in overlying relationship to the upper portion of the guide sleeves 34 and 36, respectively, being respectively secured to upper ends of the flexible force transmitting cables 38 and 40. The levers 52 and 54 include lower lever portions 60 and 62, respectively, see Figure 3, which comprise spaced strap members extending in arcuate relationship beneath the aft portion of the boat hull, which have secured on the lower end portions thereof extending into the water in which the hull is floated paddles 64 and 66, respectively, which comprise overlapping blade elements 68 which consist of spaced transverse support shafts 70 pivotally mounting suitable support sleeves 72, see Figure 7, integral with plate members 74 constituting the blade elements. Considering Figures 5 and 6, when the levers 52 and 54 are

moved in a counter-clockwise direction as seen in Figure 5 the blade element 68 will tend to move in the direction indicated by the direction arrows of Figure 5 due to the resistance of the water. When the levers 52 and 54 move upwardly in a clockwise direction as viewed in Figure 6, the blade elements 68 will pivot into trailing relationship as indicated by the direction arrows in Figure 6 offering substantially no resistance to movement of the hull through the water. Suitable transverse stop elements 76, see Figures 5 and 6, for example, are provided on lever portions 60 and 62 in the path of pivotal movement of the blade elements, see Figure 5, permitting a propulsion stroke to be accomplished.

Circumposed about the support shaft 50 are coil spring assemblies 78 and 80 which include one end portion 82 and 84, respectively, see Figure 3, in engagement with the outer surface of the stern of the boat hull, the other end portion of which indicated at 86 and 88, respectively being disposed beneath a portion of the force transmitting levers 52 and 54, respectively. Thus when the force transmitting levers 52 are urged downwardly as indicated in Figure 5 the coil spring circumposed about the shaft 50 will be wound up or tightened and store up sufficient energy to urge the force transmitting levers upwardly as indicated in Figure 6. The force transmitting levers may be operated alternately in the usual manner of rowing a boat, or be operated independently for the purpose of turning the boat.

Additionally, the vertical leg movement by an individual from a seated position for propelling a boat minimizes the effort and fatigue of such individuals, as compared with conventional mannual propulsion means. Furthermore, the novel boat of the invention may be operated in a relatively noiseless fashion, and thus is especially adaptable in sports such as hunting and fishing.

Thus there has been disclosed a novel sportsman's boat which fully conforms with the objects of invention heretofore set forth. 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 appended claims.

What is claimed as new is as follows:

1. A boat comprising a buoyant hull including fore and aft portions, a central opening in the bottom of the hull, a seat assembly disposed transversely of the central opening accommodating an occupant of the boat thereon with his feet depending in the water in which the hull is floating, and a foot actuated propulsion assembly on the hull including spaced stirrup members depending adjacent opposite sides of the central opening for engagement with an occupant's feet, a rotatable support shaft transversely disposed on the stern of the hull, spaced levers each secured at the mid-point to said shaft for rotation therewith, said levers having forwardly extending portions extending toward the fore portion of the boat and terminating in overlying relationship with respect to the central opening and having rear end portions extending below the bottom of the hull, paddles on the lever rear end portions, and means connecting the lever forwardly extending portions to said stirrup members.

2. A boat comprising a buoyant hull including fore and aft portions, a central opening in the bottom of the hull, a seat assembly disposed transversely of the central opening accommodating an occupant of the boat thereon with his feet depending in the water in which the hull is floating, and a foot actuated propulsion assembly on the hull including spaced stirrup members depending adjacent opposite sides of the central opening for engagement with an occupant's feet, a rotatable support shaft transversely disposed on the stern of the hull, spaced levers each secured at the mid-point to said shaft for rotation therewith, said levers having forwardly extending portions extending toward the fore portion of the boat and terminating in overlying relationship with respect to the central opening and having rear end portions extending below the bottom of the hull, paddles on the lever rear end portions, means connecting the lever forwardly extending portions to said stirrup members, and resilient means operatively connected to said shaft and said levers for resisting downward movement of the forwardly extending portions of said levers during a stroke for propelling the hull and automatically returning the lever forwardly extending portions to an elevated position for a subsequent propulsion stroke of said levers.

3. A boat comprising a buoyant hull including fore and aft portions, a central opening in the bottom of the hull, a seat assembly disposed transversely of the central opening accommodating an occupant of the boat thereon with his feet depending in the water in which the hull is floating, and a foot actuated propulsion assembly on the hull including operating means depending adjacent opposite sides of the central opening for engagement with an occupant's feet and force transmitting means depending from the stern of the hull in operative engagement with said operating means, said hull including a pair of vertically disposed guide sleeves on opposite sides of the central opening in the hull, the operating means comprising flexible cables extending through the guide sleeves and including stirrup members on the lower ends thereof for receiving an occupant's feet therein, the force transmitting means comprising a support shaft transversely disposed on the stern of the hull, forwardly extending levers journaled on opposite sides of the support shaft, the forward end portion of the levers being connected to upper end portions of the flexible cable, paddles integral with rear end portions of the levers and extending below the bottom of the hull, said paddles including pivotal blade elements maintained rigid upon pivotal movement of the levers in one direction and pivotal into the direction of movement of the hull when the levers are moved in an opposite direction, and resilient means engaged with the forwardly extending levers resisting downward movement thereof during a stroke for propelling the hull and automatically returning the levers to an elevated position for a subsequent propulsion stroke of said levers.

References Cited in the file of this patent

UNITED STATES PATENTS

1,332,634	Piateski	Mar. 2, 1920
1,793,973	Stamegna et al.	Feb. 24, 1931
1,794,883	Corder et al.	Mar. 3, 1931
2,525,349	Gulley	Oct. 10, 1950
2,723,640	Brown	Nov. 15, 1955