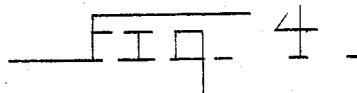
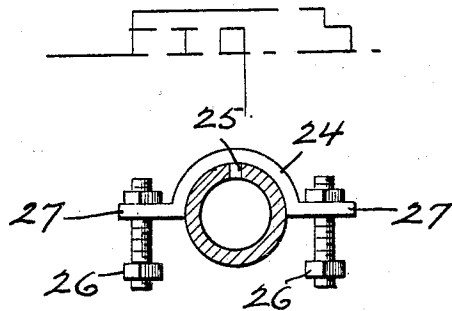
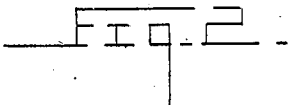
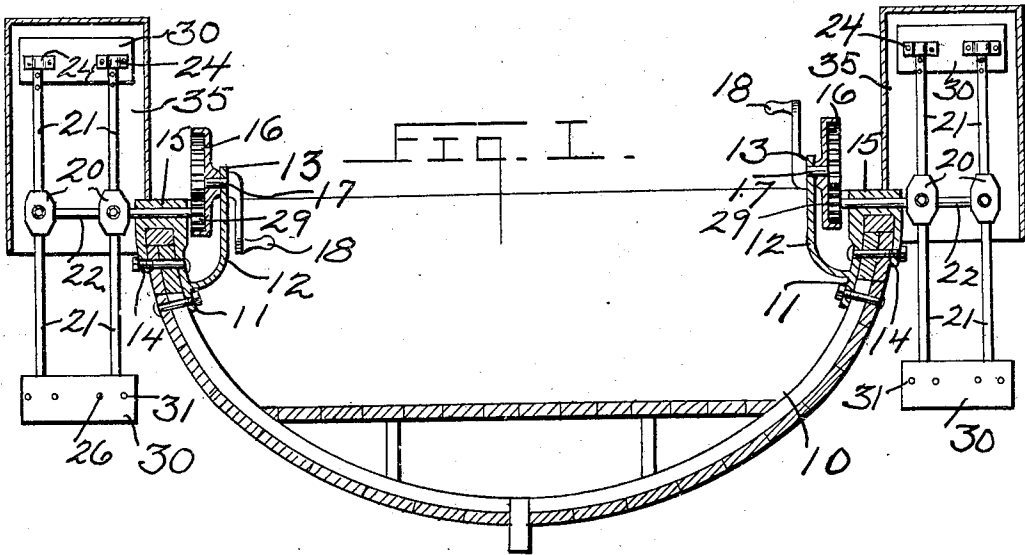


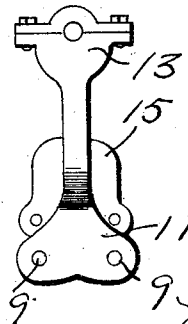
H. ZEMKE.
PROPELLER FOR BOATS.
APPLICATION FILED JULY 15, 1909.

937,735.

Patented Oct. 19, 1909.



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HENRY ZEMKE, OF BRIDGEWATER, SOUTH DAKOTA.

PROPELLER FOR BOATS.

937,735.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed July 15, 1909. Serial No. 507,705.

To all whom it may concern:

Be it known that I, HENRY ZEMKE, a citizen of the United States, residing at Bridgewater, in the county of McCook and State of South Dakota, have invented certain new and useful Improvements in Propellers for Boats, of which the following is a specification.

This invention relates to certain new and useful improvements in propellers for boats.

The object of this invention is to provide a light, simply constructed and manually operated mechanism, arranged to be adjustably secured to a small boat.

Another object is to provide a propeller wheel, so constructed that the dip of the blades may be adjusted relative to the displacement of the boat and the load carried thereby.

With these and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described and particularly pointed out in the appended claim, it being understood that changes in the specific structure shown and described may be made within the scope of the claim without departing from the spirit of the invention.

In the drawings forming a part of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 shows a transverse sectional view of a boat constructed according to my invention. Fig. 2 shows a perspective view of one of the blade securing members. Fig. 3 shows a broken detail of one of the blade carrying yokes. Fig. 4 is a view of one of the carrying brackets.

In the drawings, the numeral 10 designates a boat provided with my improved boat mechanism. This mechanism includes two similar carrying members, each comprising a base plate 11 having the bolt openings 9, from which extend the brackets 12. Each bracket 12 at its upper end is provided with a bearing 13. Extending from the base plate 11 is the shaft bearing 15, from which extends the outer securing plate 14. This outer securing plate 14 is also provided with suitable bolt openings, as shown. Revolvably held within the upper bearing 13 is the arbor 17, which carries the internal gear 16 at one end and the operating handle 18 at the other. Revolvably held within the bearing 15 is the paddle shaft 22,

this shaft being provided with two similar hubs 20 which are preferably cast directly upon the shaft 22 to form an integral part thereof.

Firmly secured within the hubs 20 are the stands 21, which are preferably in the form of tubes, so that I provide a maximum of rigidity with a minimum of weight. These stands 21 are also firmly embedded within the hubs 20 and are held at right angles to one another, as clearly disclosed.

The carrying members are securely fastened to the gunwales of the boat, in such a manner that the plate 14 is held on the outside of the gunwales and the plate 11 on the inner side of the gunwales. Suitable bolts are carried through the openings within the inner and outer securing plates as shown in Fig. 1. These carrying members are secured to the gunwales of the boat opposite one another.

In order to adjust the dip of the paddle blades, I provide the approximately U-shaped securing members 24 having the securing ears 27 carrying the bolts 26, while extending inwardly from the curved portion of these securing members is the pin 25. Each paddle blade 30 is provided with two sets of bolt openings 31 arranged to receive the securing bolts 26, so that each paddle carries two of these U-shaped securing members, as disclosed.

The stands 21 are provided with the openings 23 arranged to receive the pins 25, so that each paddle blade is adjustably secured to its two stands. In order to adjust the dip of the blades it will then simply be necessary to loosen the bolts 26 so that the pins 25 may be carried out of their seats 23 and then give the blades the proper adjustment. Secured to each shaft 22 is a pinion 29 these pinions being arranged to mesh with the internal gear 16 so that in rotating these gears 16 a rotary movement will be imparted to the paddle shaft. One of the principal advantages of this construction lies in the fact that no rudder is necessary in connection with the operation of the boat. Each shaft being provided with an independently operated paddle wheel, the boat can not only be stopped and started at will, but in reversing one of the paddle wheels, the boat can be promptly turned. Secured to the sides of the boat by any suitable means are the paddle boxes 35. As shown in Fig. 1, the stands 21 are held in parallel spaced relation, so

that the paddle blades 30 will enter the water at a proper angle.

And having thus described my said invention, what I claim as new and desire to secure by United States Letters Patent is:

5 In a propeller mechanism of the character described the combination with a carrying member including a shaft bearing from which extends an outer and an inner secur-
10 ing plate, an upwardly projecting bearing bracket carried by said inner plate, of an arbor carried by said bracket, an operating handle secured to said arbor, an internal gear carried by said arbor, a shaft within
15 said shaft bearing, two hubs carried by said

shaft, two tubular stands secured to said hubs crosswise, each stand having a series of perforations near its ends, said stands being held in parallel spaced relation, a U-shaped securing ear having a projecting pin adjust- 20 ably secured within the seats at the ends of said stands, and propeller blades secured to said U-shaped securing ears, as and in the manner set forth.

In testimony whereof I affix my signature, 25 in presence of two witnesses.

HENRY ZEMKE.

Witnesses:

ADOLPH VOGT,
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