March 12, 1929. J. M. HATZI 1,705,402

BOAT

Filed June 28, 1927

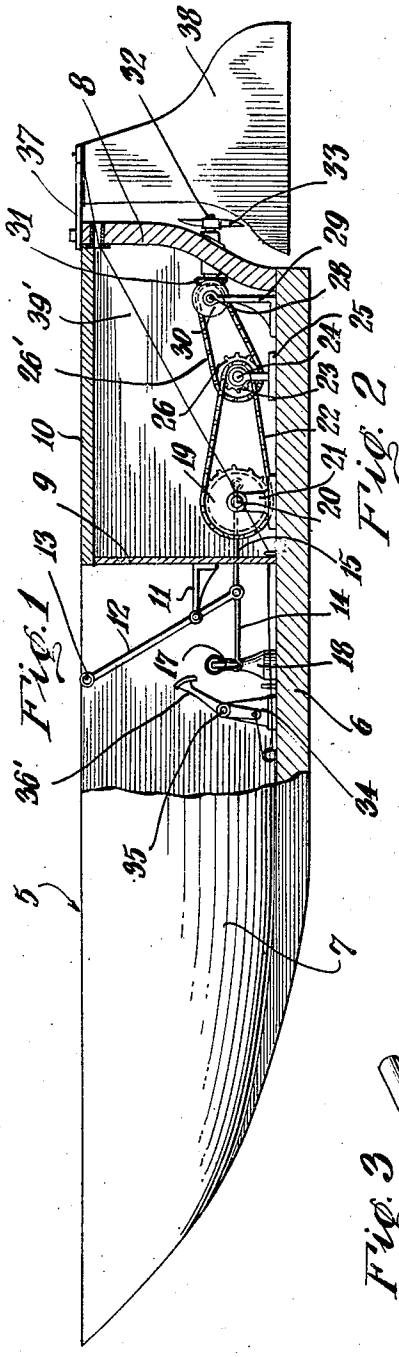


Fig. 1

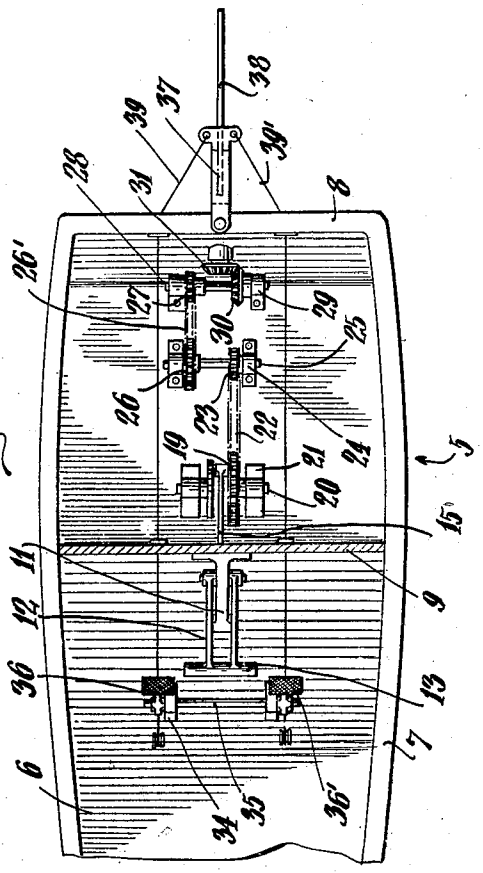


Fig. 2

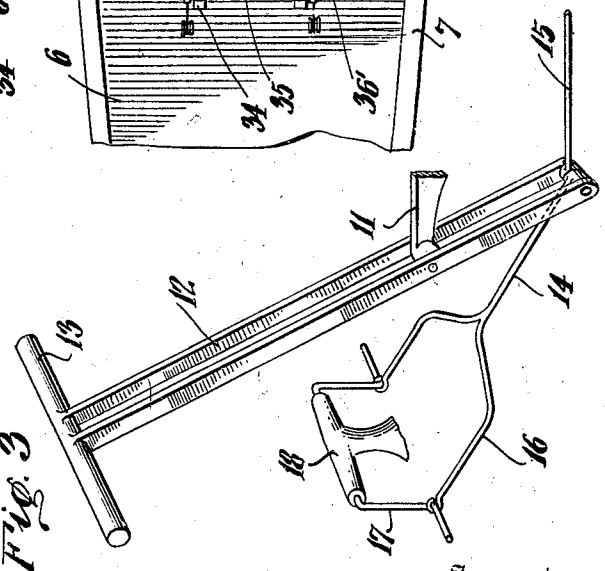


Fig. 3

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UNITED STATES PATENT OFFICE.

JOSEPH M. HATZI, OF FORMAN, NORTH DAKOTA.

BOAT.

Application filed June 28, 1927. Serial No. 201,987.

This invention relates to boats and more particularly to the propelling and navigating means therefor.

Heretofore, boats of the character involved in this invention have been propelled and steered by the use of oars which method not only was tiresome and strenuous but also required a large amount of skill to prevent capsizing of the craft.

It is therefore the main object of this invention to provide simple and efficient operating means which can readily be utilized without any danger of overturning by any person at all, even those without knowledge or skill in the art of rowing, canoeing, etc.

A further aim is in the provision of easily operated navigating means positioned within easy reach of the feet of the pilot and which requires very little effort to maneuver.

These objects, together with other minor ones, which will become apparent as the description progresses, are accomplished by the novel construction, combination and arrangement of elements, hereinafter more fully delineated and depicted in the accompanying illustration, forming an important component of this disclosure, and in which:

Figure 1 is a side elevational view of a boat equipped with propelling and navigating mechanism in accordance with this invention, part of the shell being broken away to show the inner construction.

Figure 2 is a fragmentary top plan view of the same.

Figure 3 is a perspective view of the hand controls of the propelling mechanism.

In the drawing, the numeral 5 generally designates a boat consisting of a flat bottom 6, side shell members 7 and a rear element 8, there being a partition 9 near the rear of the boat to form a compartment provided with a cover 10 serving as the operator's seat.

Extending forwardly from the partition 9 is a bracket 11 to which is pivoted, in its length, a forked lever 12 having a transverse handle bar 13 at the top thereof.

Pivoted to the lower end of the lever 12 is a pair of oppositely extending levers 14 and 15, the former being provided with a fork 16 pivoted on a crank 17 rotatable in a support 18 in the bottom 6 of the boat and the latter passing through a slot in the partition 9 and being eccentrically pivoted to a sprocket wheel 19 rotatable on a stud 20 secured in a bracket 21.

The wheel 19 is connected by a chain 22 with a similar but smaller wheel 23 fixed on a rod 24 journalled in a pair of bearings 25, the rod also carrying a large sprocket 26 connected by a chain 26′ which together with a smaller sprocket 27 fast on a rod 28 is rotatably mounted in a pair of bearings 29.

Secured on the rod 28 is a bevel gear 30 meshing with a mating gear 31 fixed on a screw 32 journalled in the rear 8 of the boat, the screw carrying a propeller 33 by which the boat is moved in an obvious manner.

Thus, by moving the lever 12 forward and backward in a continuous motion, power, at a greatly increased speed through the gear train is transmitted to the propeller 33.

The navigating means consists of a pair of brackets 34 in which is fixed a rod 35 carrying a pair of spaced foot pedals 36 and 36′ easily accessible from the seat 10.

Pivoted to the top edge of the rear 8 is a T-shaped arm 37 carrying a rudder 38, the arms of the elements 37 being respectively connected by cables 39 and 39′ to the pedals 36 and 36′.

Therefore, if it is desired to turn to the right, the pedals 36 are depressed, transmitting corresponding motion to the rudder 38.

It is not intended that the foregoing be interpreted as limitative, as changes in construction and details thereof may well be made within the scope of the appended claim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

In a boat having a propeller, a train gear drive therefor, a crank on the first gear of said train, a manually operable lever pivoted in the boat, a link connection between the end of said lever and link connection, a bracket fixed on the bottom of the boat, a shaft rotatable transversely in said bracket, cranks on the ends of said shaft adapted to be pedally oscillated, and a forked link engaging said cranks and connecting with the first link whereby the hands and feet of an operator may be used conjunctively to propel the boat.

In witness whereof I have signed my name.

JOS. M. HATZI.