Sept. 15, 1931. M. L. LOUVIER 1,823,109

BOAT PROPELLING UNIT

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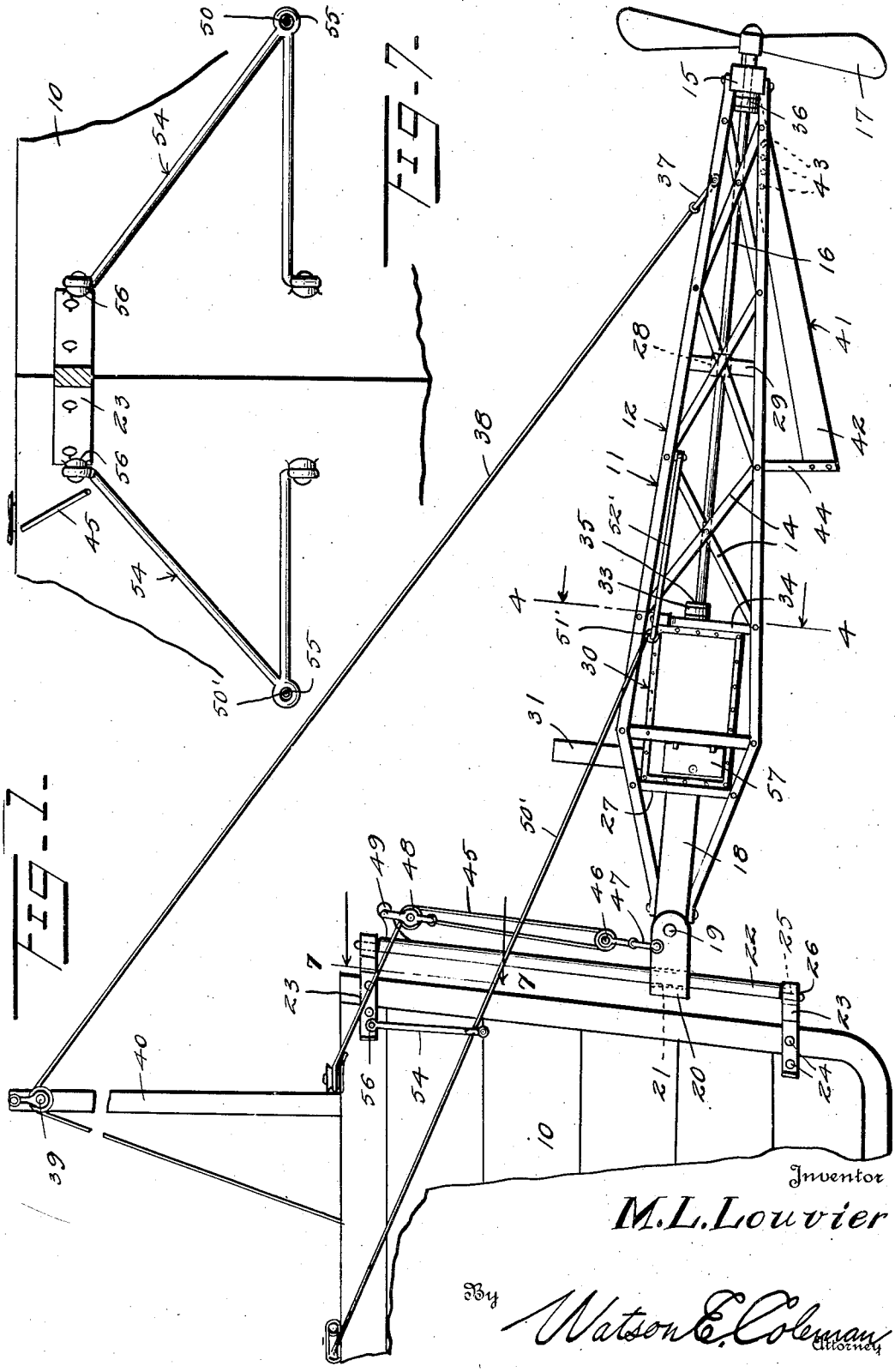


Fig. 7.

Fig. 1.

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BOAT PROPELLING UNIT

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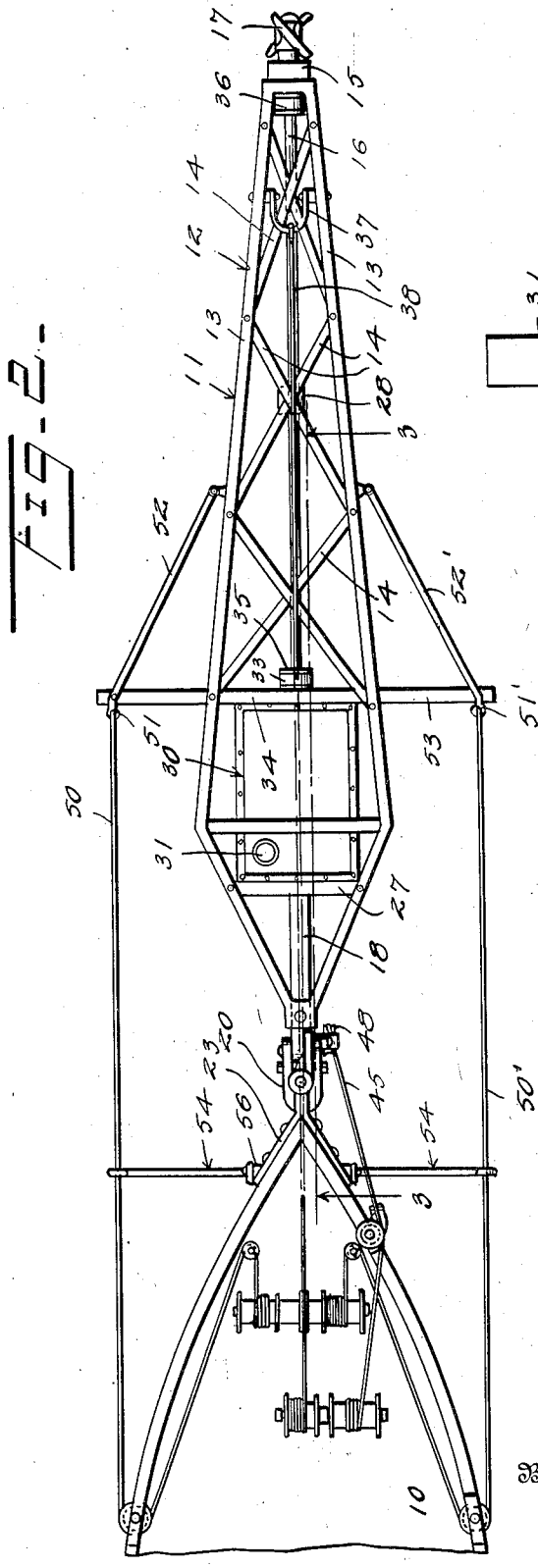


FIG. 2.

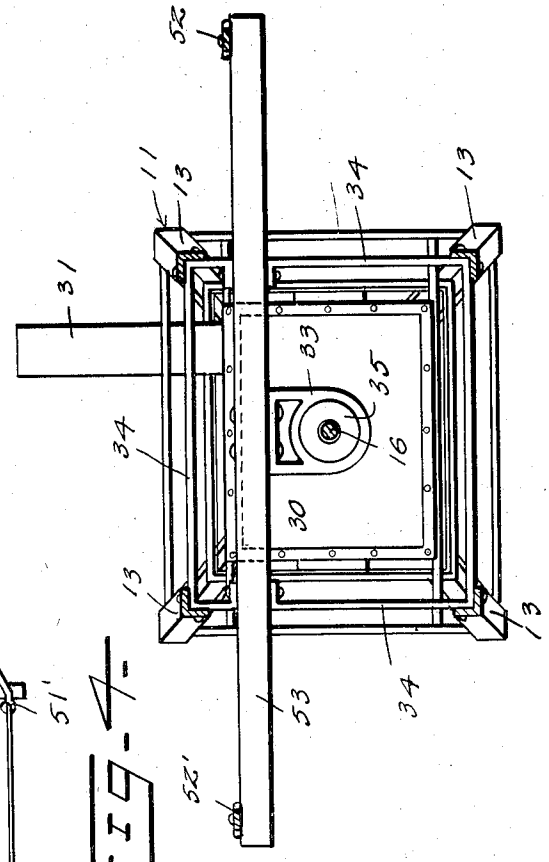


FIG. 4.

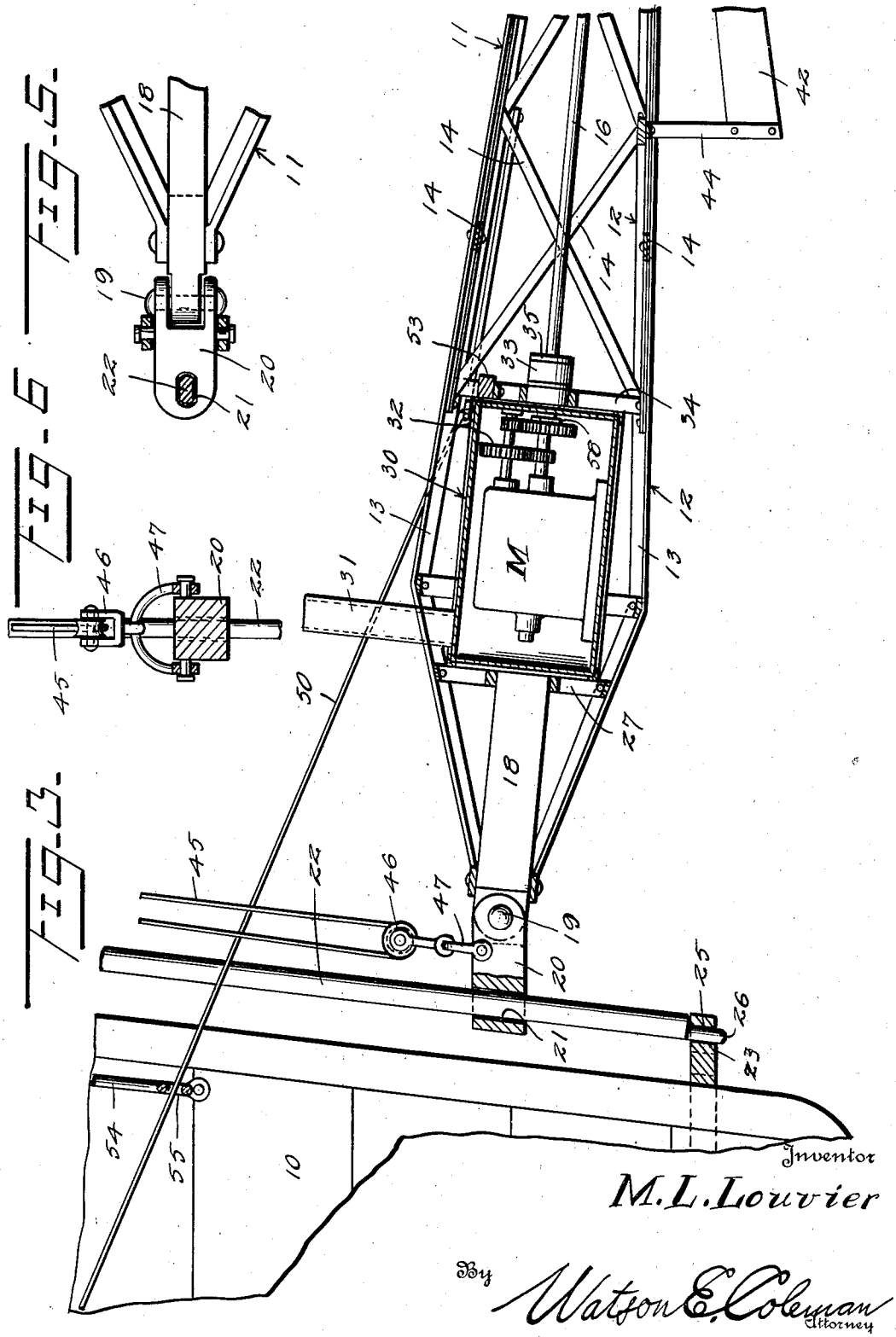
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BOAT PROPELLING UNIT

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Patented Sept. 15, 1931

1,823,109

UNITED STATES PATENT OFFICE

MARIUS L. LOUVIER, OF PORT ARTHUR, TEXAS, ASSIGNOR OF TWENTY-THREE AND THREE-FOURTHS PER CENT TO SULLY LOUVIER, TWENTY-THREE AND THREE-FOURTHS PER CENT TO ALEXANDER LOUVIER AND FIVE PER CENT TO XAVIER CHRIST, ALL OF PORT ARTHUR, TEXAS

BOAT PROPELLING UNIT

Application filed March 19, 1931. Serial No. 523,856.

This invention relates to boat propelling mechanisms and more particularly to a removable mechanism which is adapted to be removably mounted on a boat for assisting in withdrawing the boat from a bank of mud or the like.

An object of this invention is to provide a boat propelling device of this kind which may be readily attached to any boat construction, the device embodying power means for rotating a propeller carried by the device which may be swung to any desired angle with respect to the boat.

Another object of this invention is to provide a propelling device of this kind embodying means whereby the device may be lowered to any desired degree in the water.

A further object of this invention is to provide a device of this kind which, in addition to assisting in pulling or pushing a boat off of a beach or mud bank, will readily steer the boat in its pushing or pulling action.

The above and various other objects and advantages of this invention will in part be described in, and in part be understood from the following detail description of the present preferred embodiment, the same being illustrated in the accompanying drawings wherein:—

Figure 1 is a detail side elevation of a device constructed according to the preferred embodiment of this invention mounted on a boat which is shown in fragmentary form.

Figure 2 is a top plan view of the device;

Figure 3 is a sectional view taken on the line 3—3 of Figure 2;

Figure 4 is a sectional view taken on the line 4—4 of Figure 1;

Figure 5 is an enlarged plan view partly in section showing the adjustable connection of the frame with the guide;

Figure 6 is a fragmentary sectional view partly in detail showing the construction of the slide member; and

Figure 7 is a sectional view taken on the line 7—7 of Figure 1.

Referring to the drawings wherein like numerals of reference designate corresponding parts throughout the several views, the numeral 10 designates generally a boat upon which a boat propelling unit generally designated as 11 is adapted to be adjustably mounted. The boat propelling unit 11 comprises an elongated frame structure 12 which is preferably constructed of a plurality of elongated L shaped bars 13 which are connected together by angularly disposed bracing members or rods 14 so as to provide a solid or strong frame structure. The frame members 13 are mounted in outwardly converging relation and at the outer ends are secured to a block 15 through which a propeller shaft 16 is disposed, the propeller shaft 16 carrying a propeller 17 at the outer end thereof.

The block 15 constitutes a bearing block within which suitable thrust members may be disposed for taking up the forward or reverse thrust of the shaft 16. The inner end of the frame 12 is constructed in substantially converging relation, the frame members converging toward a longitudinally disposed plate 18 to which the frame members are secured, this plate 18 being provided with a suitable aperture therethrough for loosely receiving a pin 19 which also extends through a slidable block 20. This block 20 has a bifurcated outer end portion within which the inner end of the plate 18 is rockably mounted. The block 20 is also provided with an elongated slot 21 so that the block 20 may slidably engage an elongated guide bar 22 which is secured by means of Y shaped yokes 23 to the boat 10.

Preferably, the Y shaped member 23 is mounted on the forward end or bow of the boat, the two legs of the yoke 23 engaging the sides of the boat and receiving securing bolts 24 which extend between the two legs of the yoke 23 and through the stem of the boat 10. The central leg of the yoke 23 is provided with an aperture 25 within which the rounded end portion 26 of the guide bar 22 is loosely mounted. Through the use of this construction the guide bar 23 may swing in a horizontal plane on the forward end of the boat 10.

The outer end of the plate 18 is secured within the frame structure 12 by means of a transversely disposed brace 27 and an intermediate bearing 28 is mounted on transverse

braces 29 which extend between the elongated bars 13 of the frame 11.

A motor housing generally designated as 30 is mounted within the frame 12 adjacent the forward end thereof, this housing 30 having a vent pipe 31 so as to permit the cooling of the motor or engine M which is mounted in the housing 30. This motor or engine M is connected to the drive shaft 16 by means of a train of gears 32 so that the drive shaft 16 will rotate at a speed considerably reduced from the speed of the motor M. The motor M may be a conventional power member such as an electric motor, gasoline engine, turbine, or Diesel engine, or if desired, may be a steam engine connected by means of a steam line to the boiler of the boat 10.

An inner bearing 33 is mounted in a transversely disposed brace 34 adjacent the housing 30 and suitable thrust members 35 may be disposed about the shaft 16 so as to cooperate with the outer thrust members 36 in the bearing structure 15 in taking up the longitudinal thrust of the shaft 16.

In order to vertically adjust the propeller 17 so as to dispose the propeller in a suitable depth of water there is provided a clevis 37 which is rockably secured to the frame structure 12 adjacent the outer end thereof and a flexible member 38 is connected at one end to the clevis 37, and the flexible member 38 which is in the form of a rope or cable, is trained over a pulley 39 which is mounted on a support 40 carried by the boat 10. The opposite end of the cable or rope 38 may be trained over suitable drums or the like so that the propeller may be hoisted or lowered as desired.

A keel member generally designated as 41 is secured to the frame structure 12 at the bottom thereof, this keel member 41 comprising an elongated frame 42 which is secured at the outer end thereof to the frame structure 12 by means of bolts or rivets 43 or the like and the forward end of the keel 41 is secured to a Y shaped brace 44 which is mounted on the frame structure 12.

The inner end of the frame structure 12 may be raised or lowered by means of a flexible member 45 which is trained over a pulley 46, which pulley 46 is secured to a clevis 47 on the sliding block 20. A second pulley 48 is carried by an outstanding arm or lug 49 on the upper end of the guide bar 22, one end of the cable or rope 45 being connected to the pulley 48 and the opposite end passed over the bow of the boat and wound on a suitable hoisting mechanism.

In order to hold the frame structure 12 against lateral swinging movement there are provided adjustable cables 50 and 50′ which are secured at the outer ends thereof to eye members 51 and 51′ respectively, these eye members 51 and 51′ being integral with elongated bars 52 and 52′ respectively. The forward ends of the bars 52 and 52′ are secured to the frame 12 and the inner ends thereof are held in outstanding relation to the frame 12 by means of a transversely disposed brace 53. The inner ends of the cables 50 and 50′ are trained over drums or the like so that they may be tightened for holding the frame structure 12 against lateral swinging movement.

A V shaped guide member 54 is secured to the upper yoke 23 and to the boat 10 and is provided with a guide eye 55 within which the cables 50 and 50′ are loosely mounted. Through the use of these guide members 54 the cables 50 and 50′ are held in spaced parallel relation to each other and when one of the cables is tightened or drawn inwardly so as to swing the frame 12 laterally of the boat the other of the cable members is loosened but retained in substantially taut condition.

The upper yoke member 23 is provided with outstanding lugs or eyes 56 for receiving one end of the guide members 54.

In the operation of this device, where it is desired to propel a boat or remove the boat from a sand bank or the like, the guide member 23 may be secured in position on the bow of the boat by means of the yoke members 23, the inner end of the frame 12 being adjusted by means of the cable 45 and the outer end thereof adjusted by means of the cable 38. In this manner, the propeller may be suitably positioned with respect to the vessel or boat 10 and at a point remote therefrom so that the propeller will operate in deep enough water for moving the boat 10. The propeller is operated by means of the power member M which, as heretofore stated, may be an electric motor, gasoline engine or steam engine.

The housing 30 of the engine M may be provided with a suitable hinged door 57, this door structure 57 being such as to permit, if desired, the submersion of the entire frame structure 12 without affecting the operation of the motor M. The housing 30 is preferably of closed construction which is water proof and the drive shaft 16 extends through a stuffing box or packing gland 58 which is mounted in the housing 57 in the rear wall thereof.

It is, of course, understood that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:—

1. A boat propelling unit of the character described comprising a frame structure, a motor housing capable of being submerged, a power member mounted in the housing, a propeller, operating means connecting the propeller with the power means, and coacting means carried by the boat and the frame

whereby to vertically and horizontally adjust the frame and to maintain the propeller in desired submersion in the water.

2. A boat propelling unit of the character described comprising an elongated frame structure, a power member supported within the frame, a housing for the power member, a drive shaft rotatably mounted in the frame, a propeller carried by one end of the drive shaft, coacting means carried by the boat and one end of the frame structure whereby to vertically adjust one end of the frame, and means engaging the frame adjacent the opposite end whereby to vertically adjust said opposite end and hold said opposite end in adjusted position.

3. A boat propelling unit of the character described comprising a frame structure, a power member supported within the frame, a housing for said power member, a propeller rotatably carried by the frame and operatively connected to the power member, an elongated guide member, means for mounting the guide member in outstanding position on one end of the boat, said guide member having end portions swingably mounted in said mounting means, and a slide member carried by the frame and engaging the guide whereby to permit vertical adjustment of one end of the frame.

4. A boat propelling unit of the character described comprising an elongated frame structure, a power member supported within the frame, a propeller operatively connected to the power member, a substantially vertically disposed guide member, guide supporting means engaging the boat and the guide whereby to permit horizontal swinging movement of said guide, a slide member loosely engaging said guide and means for rockably connecting said slide member to said frame structure whereby to permit vertical rocking movement of the frame coactive with the vertical adjustment of one end thereof.

5. A boat propelling unit of the character described comprising an elongated frame structure, a propeller rotatably carried by the frame structure, an elongated guide member, means for swingably supporting said guide member on a boat and in outstanding relation to the boat, a vertically adjustable slide member engaging the guide, means carried by the slide member and the guide whereby to vertically support said slide member in adjusted position on the guide, and means for rockably connecting the slide to the frame structure.

6. A boat propelling unit of the character described comprising an elongated frame structure, a propeller rotatably carried by the frame, means for holding the frame structure in substantially horizontal position, flexible means engaging the boat and the frame for holding the frame structure against lateral movement with respect to the boat and means for vertically adjusting said frame.

7. A boat propelling unit of the character described comprising an elongated frame structure, a propeller rotatably supported by the frame, an upright guide member supported for horizontal swinging movement with respect to the boat, a slide rockably carried by the frame and engaging the guide member, means engaging the guide and the slide whereby to vertically adjust the slide on the guide, and a depending keel supported beneath the frame.

8. A boat propelling unit of the character described comprising a frame, a power member mounted in the frame, a propeller operatively connected with the power member, and means for holding the frame in outstanding relation to a boat, said means including means permitting vertical and horizontal swinging movement of the frame coactive with the vertical adjustment of the frame.

In testimony whereof I hereunto affix my signature.

MARIUS L. LOUVIER.