

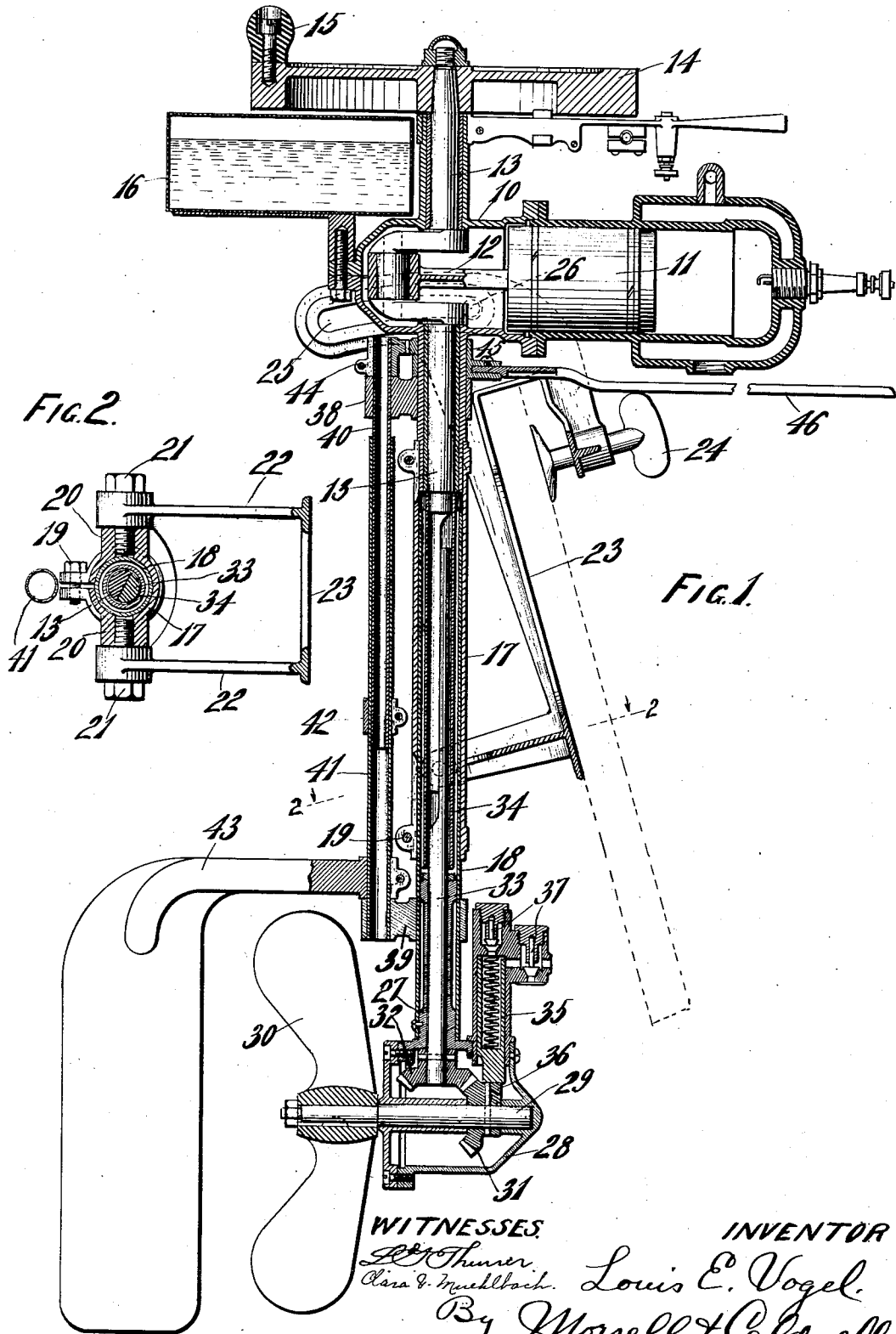
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L. E. VOGEL.
MOTOR PROPELLER.

APPLICATION FILED NOV. 22, 1912.

1,070,089.

Patented Aug. 12, 1913.



WITNESSES

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MOTOR-PROPELLER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LOUIS E. VOGEL, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Motor-Propellers, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to motor propellers for boats and especially to that type of motor propeller which is detachable and portable and capable of adjustment to row boats and other small boats of various types.

An object of the invention is to facilitate adjustment of the clamping means by which the motor propeller is attached to the stern of the boat, permitting such clamping means to assume a greater or less degree of inclination to fit the stern of the boat without altering the proper position of the other parts of the device, an object being to accomplish the adjustment of the clamping means at the upper end thereof where the adjustment clamps may be accessible without the necessity for leaning over the edge of the boat.

Another object of the invention is to improve upon the construction of the motor shaft whereby it may be more readily lengthened or shortened in the adjustment of the device to raise or lower the propeller member with relation to the engine member.

With the above and other objects in view the invention consists in the motor propeller as herein claimed and all equivalents.

Referring to the accompanying drawings in which like characters of reference indicate the same parts in the different views: Figure 1 is a central sectional view of a motor propeller constructed in accordance with this invention; and Fig. 2 is a transverse sectional view thereof on the line 2-2 of Fig. 1.

In these drawings 10 indicates an engine casing in the cylinder portion of which is fitted a piston 11 as usual connected by a connecting rod 12 with the crank of a vertically disposed crank shaft 13. A fly wheel 14 is fixed on the upper end of the crank shaft and is provided with a knob 15 by means of which it may be turned by hand for starting the engine. A gasolene reservoir 16 is mounted on the casing beneath the fly wheel and opposite the cylinder and has the usual carbureter connection, not shown, with the cylinder of the engine. The casing

10 at the lower bearing of the vertical crank shaft has securely clamped to it a tubular sleeve 17 which together with a tube 18 telescoping within it constitutes a casing for the engine shaft connecting the engine with the propeller. The lower end of sleeve 17 is split and its parts are held together by a clamping bolt 19 to clamp it securely upon the telescoping tube 18 and lock the latter in its adjustments. The sleeve 17 near its lower end is provided with oppositely positioned bosses 20 into which are threaded pivot screws 21 forming pivotal connections for the ends of a pair of parallel arms 22 extending from the lower end of a clamping bracket 23 which is hook-shaped at its upper end to pass over the edge of the stern of the boat and is provided with a thumb screw 24 for clamping the device to the stern of the boat. At its upper end the clamping bracket 23 has a pair of rearwardly extending projections containing arc-shaped slots 25. Clamping screws 26 pass through the slots 25 and into the casing 10 to clamp the bracket 23 in its pivotal adjustments on the pivot screws 21 so that the clamping brackets may be locked in any angular position to which they have been swung in order to fit the inclination of the stern of the boat without disturbing the upright position of the crank shaft.

In the lower end of the telescoping tube 18 is fitted a bearing 27 to which is secured a gear casing 28 having the propeller shaft 29 journaled therein with the propeller secured on the projecting rear end thereof. A beveled pinion 31 on the propeller shaft meshes with a beveled pinion 32 on the lower end of the motor shaft 33 which is journaled through bearing 27 and extends upwardly fitting within a tubular sleeve 34 which surrounds the lower portion of the crank shaft 13. The lower portion of crank shaft 13 has one half cut away leaving it of semi-cylindrical shape in cross section and the upper portion of motor shaft 13 is likewise cut away so that the two half sections overlap each other to constitute an adjustable driving connection between the crank shaft and the motor shaft, the sleeve preventing displacement of such overlapping portions. When the clamping screw 19 is loose the telescoping tube 18 may be drawn out of the sleeve 17 so as to extend the length of the device without disturbing

the driving connection between the motor shaft and the crank shaft of the engine.

The gear casing 28 is provided with the usual spring pressed pump plunger 35 which is operated by a cam 36 on beveled pinion 31 and serves to force water through its valves 37 to the water jacket of the cylinder of the engine through a hose connection not shown.

A bearing bracket 38 is secured to the casing 10 around the lower bearing of the crank shaft and a similar bearing bracket 39 is secured to the telescoping tube 18 and within these bearing brackets are journaled a steering post formed of telescoping sections 40 and 41 respectively with a clamping collar 42 to secure them in their adjustments. The lower member 41 of the steering post has a rudder 43 fixed on it and extending back of the propeller 30 as shown, while the upper end of steering post member 40 has a segmental gear 44 fixed on it meshing with a segmental gear 45 loosely surrounding the lower bearing portion of the casing 10 and having a socket in which is secured a tiller 46. When the adjustments of the end shaft casing are made to raise or lower the propeller corresponding adjustments are made in the steering post so that the rudder keeps its position relative to the propeller and in any adjustment of the parts their driving connection with the engine is maintained and the steering connection between the tiller and the rudder is also maintained.

By means of this invention the engine shaft is made adjustable for raising or lowering the propeller with a strong driving connection between its parts even at the greatest extension adjustment by reason of the said parts having their ends cut into half sections and fitting together in overlapping relation and held against displacement by the surrounding sleeve. With this invention also the pivotal adjustments of the clamping bracket may be obtained by manipulating the clamping screws 26 above the edge of the boat so that there is no necessity

for reaching over the edge of the boat to accomplish such adjustment.

What I claim as new and desire to secure by Letters Patent is:

1. A portable motor propeller, comprising an engine having its vertical crank shaft half cut away at its lower portion, a sleeve on the engine casing surrounding the lower end of the crank shaft, a gear casing provided with a sleeve telescoping with the sleeve of the engine casing, a propeller mounted on the gear casing, a motor shaft journaled within the telescoping sleeve and geared to the propeller and having its upper end half cut away and overlapping the cut away portion of the crank shaft, a sleeve fitting around the overlapping ends of the motor shaft and the crank shaft, and means for clamping the telescoping sleeves in their longitudinal adjustments.

2. A portable motor propeller, comprising an engine having a vertical crank shaft journaled within its casing, a tubular sleeve on the engine casing surrounding the lower end of the crank shaft, a gear casing vertically adjustably connected with the sleeve and having a motor shaft with an adjustable driving connection with the crank shaft, a propeller on the gear casing having a driving connection with the motor shaft, a bracket having yoke arms pivotally connected to the tubular sleeve and provided at its upper end with a hook-like projection to engage the upper edge of the stern of a boat and also provided with a rearwardly extending slotted portion having an arc-shaped slot on the pivotal connection as a center, and a clamping screw on the engine casing passing through the arc-shaped slot for clamping the bracket in its pivotal adjustments.

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

LOUIS E. VOGEL.

Witnesses:

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