

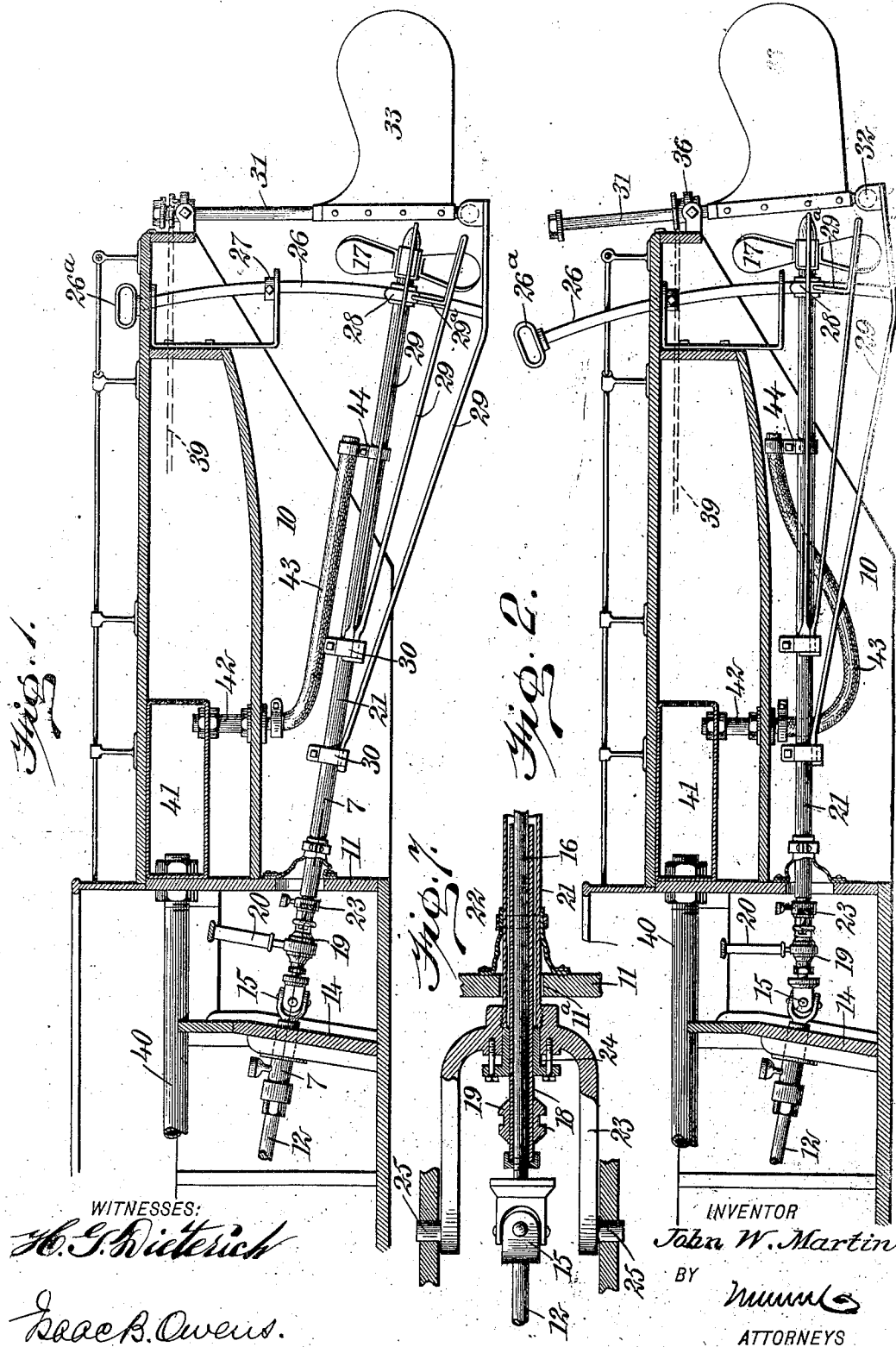
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PATENTED SEPT. 11, 1906.

J. W. MARTIN.
MARINE VESSEL.

APPLICATION FILED SEPT. 5, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

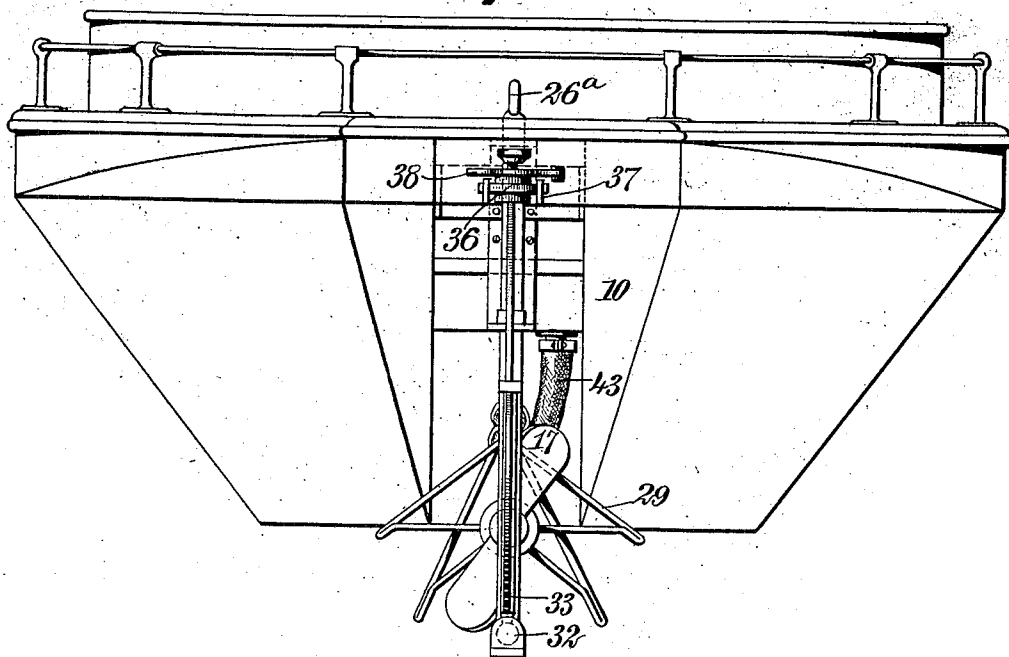


Fig. 4.

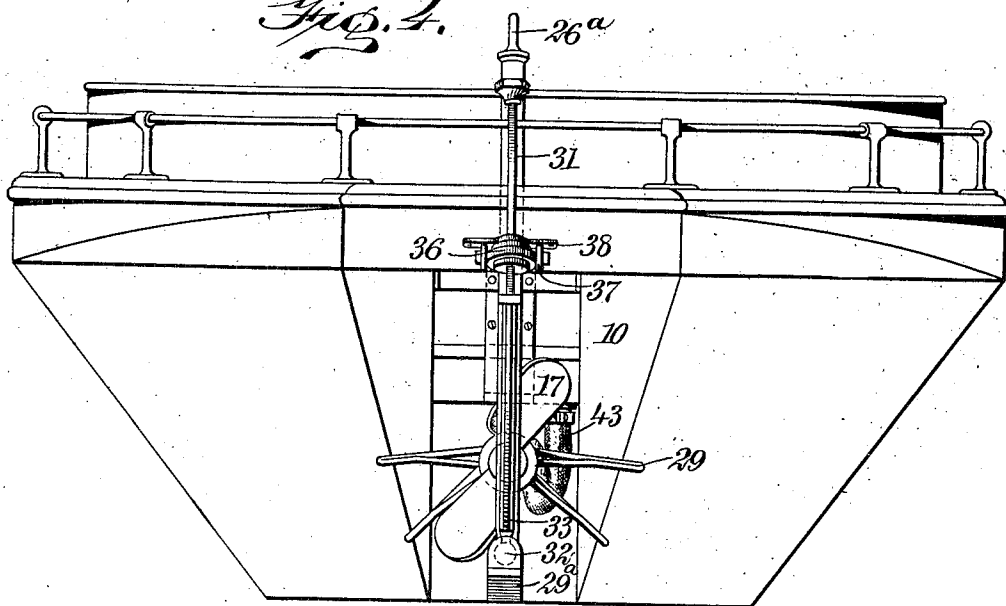


Fig. 5.

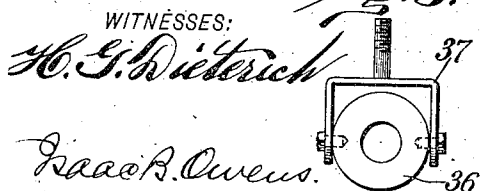
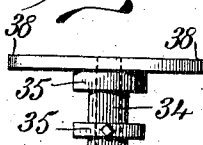


Fig. 6.



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To all whom it may concern:

Be it known that I, JOHN W. MARTIN, a citizen of the United States, and a resident of Scottsburg, in the county of Scott and State of Indiana, have invented a new and Improved Marine Vessel, of which the following is a full, clear, and exact description.

The invention relates to a marine vessel adapted particularly for use in shoal water, the boat or vessel being equipped with a propeller, the position of which may be changed at will, so that the propeller may extend downwardly below the keel of the vessel or upwardly above the keel-line, according to the depth of the water in which the propeller is operated.

The invention resides in certain special features of construction and combinations of parts, which will be fully set forth hereinafter, and particularly pointed out in the claims.

Reference is had to the accompanying drawings, which illustrate as an example the preferred embodiment of my invention, and in which—

Figure 1 is a longitudinal section of the after part of the vessel, showing the propeller in the lowered position and illustrating the coacting parts. Fig. 2 is a similar view except that the propeller is raised. Fig. 3 is a stern view showing the propeller lowered. Fig. 4 is a similar view showing the propeller raised. Figs. 5 and 6 are details of the steering-gear, and Fig. 7 is a horizontal section taken approximately along the line 7 7 of Fig. 1.

The stern, or after portion of the boat or vessel is constructed with a cavity 10, which runs fore and aft from the transom to a transverse wall 11, formed at the forward extremity of said cavity.

12 indicates the crank-shaft of the engine or a shaft in connection therewith which transmits the motive force. This shaft is mounted in a suitable bearing in a supporting-wall 14, located in the boat just forward of the wall 11, and the after end of the shaft 11 is connected by a universal joint 15 with a solid shaft 16, constituting the driving-shaft of the reversible propeller 17.

18 indicates a tubular shaft which incloses the solid shaft 16 and is in connection with the propeller 17, so that upon sliding the shaft 18 the propeller may be reversed, all of which will be understood from the prior art. The tubular shaft 18 has a collar 19, with which a suitable shifting device 20 is joined

and by means of which the propeller may be reversed at will. Loosely inclosing the tubular shaft 18 is a hollow arm or sleeve 21, the inner end of which passes through a vertically-elongated opening 11^a in the wall 11. Leakage through said opening 11^a is prevented by means of a flexible boot 22, which is clamped to the tubular shaft or arm 21 and fastened to the wall 11, as shown. The inner extremity of the tubular arm or shaft 21 has a yoke 23 fastened thereto. Acting between said yoke and the tubular shaft 18 is a packing and gland 24, which prevents leakage from the tubular arm 21 into the hull of the vessel. Said yoke 23 is pivoted within the hull by means of trunnions 25, (shown best in Fig. 7,) so that the yoke, with the parts 16, 18, and 21, may swing freely, the shaft 16 being constantly driven, however, through the universal connection 15 and shaft 12, before explained. Connected to the end portion of the tubular arm or shaft 21 is a bar 26, which extends up through the deck of the vessel at the stern thereof and is provided with a handle 26^a, by means of which the bar may be conveniently lifted. Below the deck of the vessel the bar is guided by a bracket 27, and below this bracket the bar is joined to the tubular arm 21 by a clip or other fastening 28, which may be of any desired form.

29 indicates guard-rods, which are fastened by clips 30 to the tubular arm 21, and which rods extend rearward and are bent inward, as indicated at 29^a, into engagement with the before-mentioned clip 28. One of the guard-rods 29 is fastened to the lower extremity of the bar 26, the bar projecting below the shaft 21, and said guard-rod has an extension 29^b, on which the lower end of the rudder-post 31 is stepped by a bearing 32. The rudder 33 is fastened to the rudder-post in the usual manner.

The bearing 32 is of the ball-and-socket type, which enables free relative movement of the parts 29 and 31. Above the rudder 33 the post 31 is square or angular in form and slidably fits in a sleeve 34, which is shaped corresponding to the shape of the rudder-post. Said sleeve 34 has collars 35 thereon, and between these collars a ring 36 is engaged. This ring is held in position in the stern of the vessel by means of a bracket 37. With this arrangement the rudder-post 31 is free to slide through the sleeve 34; but said sleeve and rudder-post turn as a unit. The sleeve 34 has oppositely-projecting arms 38,

to which the tiller-ropes (indicated by broken lines 39 in Figs. 1 and 2) are attached. By means of these ropes, therefore, the rudder-post, and consequently the rudder, may be turned at will. At the same time the rudder is free to move vertically with the parts 21, 29, and 26 from the position shown in Fig. 1 to that shown in Fig. 2, or vice versa.

Preferably a hydrocarbon-motor is employed to drive the propeller, and in Figs. 1 and 2 40 indicates an exhaust-pipe from said motor, which discharges into an exhaust-chamber 41, and this is provided with a union 42, passing through the bottom of the boat above the before-described opening 10 and in turn joined to a flexible pipe 43, the end of which is connected by a clip 44 with the tubular arm 21, so that the said flexible pipe is raised or lowered with the arm, as illustrated in the drawings.

In the use or operation of the invention the propeller is effective whether in the position shown in Fig. 1 or that shown in Fig. 2. Since, however, it is sunken deeper in the water when adjusted as in Fig. 1, it is more effective during this adjustment, and consequently when there is sufficient water for the purpose the parts should be lowered, as in Fig. 1. At this time the shaft 12 drives the propeller through the transmitting parts before described, and the operation is precisely the same as in the ordinary propeller-driven boat or vessel. When reaching shoal water, it is only necessary to lift the bar 26, which simultaneously raises the rudder and propeller to a point above the keel or bottommost line of the vessel. The operation then continues, though not so effective as before, and when deep water is again reached the parts may be dropped, as will be understood from the foregoing description.

It is pointed out that with the above-described arrangement should an obstruction of any sort be encountered the same will be engaged by one or several of the guards 29, and the propeller-shaft and all of its connected parts will be raised clear of the obstruction, said parts entering the pocket 10 in the stern of the boat, which is provided for this purpose. The pocket is so shaped that it will properly receive the propeller-shaft and its attachments. In this way the apparatus is made to automatically pass over any obstruction lying below the keel-line of the boat. The handle 26 is provided to permit manually raising the shaft and other parts, and, if desired, by means of this handle the shaft may be secured in raised position, for example,

while the boat is lying to anchor. Said handle also serves to guide the parts in moving up and down, as above described. By carrying an exhaust-pipe 43 under the surface of the water the noise of the exhaust is deadened.

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

1. A marine vessel having a laterally-movable propeller-shaft, for the purpose specified, an exhaust-chamber, and a flexible pipe communicating with the exhaust-chamber and having one end connected with the propeller-shaft to move therewith.

2. The combination with a marine vessel having an opening in the rear thereof, of a swinging yoke mounted within the vessel, a tubular arm or shaft attached to the yoke and extending out through the opening in the rear of the vessel, means in connection with said tubular arm or shaft for laterally moving it, a flexible boot connected to the tubular arm and secured to the hull of the vessel around said opening to prevent leakage through the opening, a propeller-shaft mounted in the tubular arm, a propeller in connection with the shaft, and a universal joint connecting the propeller-shaft with the drive-shaft.

3. A marine vessel having a propeller-shaft, a universal joint connecting said shaft with the driving-shaft, a tubular shaft encircling the propeller-shaft, a propeller in connection with the propeller-shaft, side and bottom guard-rods, connected with the tubular shaft, a rudder-post having a rudder and connected with the bottom guard-rod, and means connected with the tubular shaft for vertically swinging the propeller-shaft.

4. The combination with a marine vessel having an opening in the rear thereof, of a swinging yoke mounted within the vessel, a tubular shaft attached to the yoke and extending through the opening, a propeller-shaft mounted in the tubular shaft, side and bottom guard-rods connected with the tubular shaft and extending beyond the propeller, a rudder mounted on the bottom guard-rod, and means for swinging the tubular shaft in a vertical plane.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. MARTIN.

Witnesses:

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