

Aug. 11, 1925.

S. E. SLOCUM

1,549,564

PROPELLER MOUNT

Filed June 12, 1923

Fig. 1.

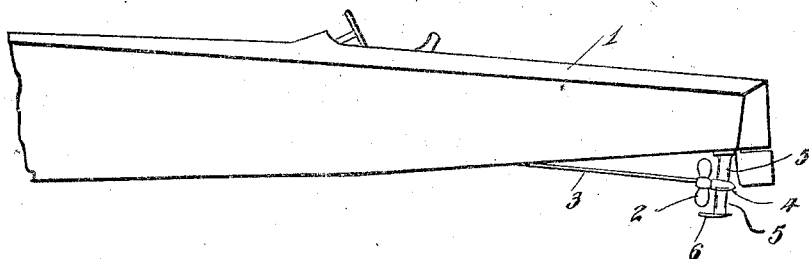


Fig. 2.

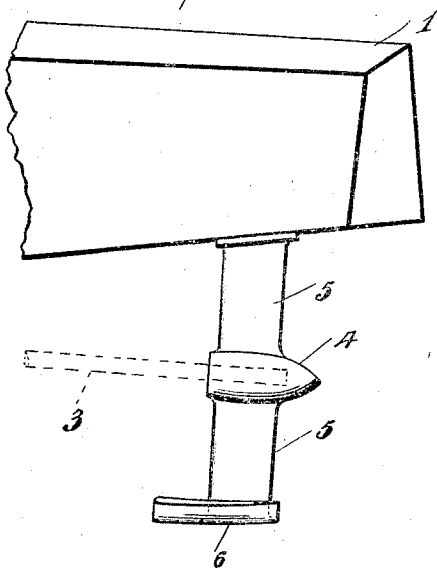


Fig. 3.

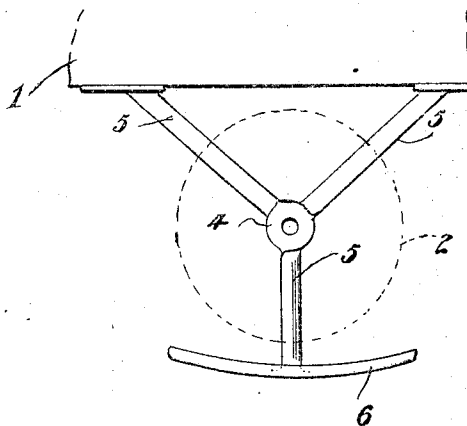
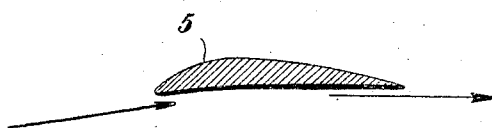


Fig. 4.



Inventor
S. E. Slocum,

By *A. K. Kaulph Jr.*
Attorney

Patented Aug. 11, 1925.

1,549,564

UNITED STATES PATENT OFFICE.

STEPHEN E. SLOCUM, OF ARDMORE, PENNSYLVANIA.

PROPELLER MOUNT.

Application filed June 12, 1923. Serial No. 644,932.

To all whom it may concern:

Be it known that I, STEPHEN E. SLOCUM, a citizen of the United States, residing at Ardmore, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Propeller Mounts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to a propelling means for water craft such as small pleasure boats and ocean vessels and has for its object to minimize the resistance of the flow to the propeller and direct the flow therefrom and prevent rotation of the wake.

A further object of the invention is to locate the strut in the rear of the propeller and thereby prevent its obstructing the flow of the water thereto.

The invention also has for its object to construct the strut with a hydrofoil section with the result of minimizing the resistance to flow as well as directing the flow from the propeller and preventing eddying formation and rotation of the wake.

A further object of the invention is to compensate for the inclination of the propeller shaft by providing a guide plate whereby to direct the water and thereby materially assist the action of the propeller.

Other objects and advantages will be apparent and suggest themselves as the nature of the invention is understood.

While the drawings illustrate an embodiment of the invention it is to be understood that in adapting the same to meet different conditions and requirements, various changes in the form, proportion, arrangement, and minor details of construction may be resorted to without departing from the nature of the invention.

Referring to the accompanying drawings forming a part of the application—

Figure 1 is a side view of the stern portion of a boat illustrative of the invention,

Figure 2 is a diagrammatic view showing the parts on a larger scale, the propeller being omitted and the propeller shaft being indicated by the dotted lines,

Figure 3 is a front view, the circular dotted lines indicating the position of the propeller, and

Figure 4 is a sectional view of a strut.

Corresponding and like parts are referred

to in the following description and designated in the several views of the drawings by like reference characters.

The numeral 1 designates the hull or body of a boat, 2 is a propeller disposed aft beneath the stern or a wing screw in the case of a twin screw vessel, and 3 the propeller shaft which may, or may not, be inclined to the horizontal. These parts may be of any usual construction and arrangement.

The strut forming a mount for the rear end of the propeller shaft 3 comprises a hub 4 forming a bearing for the propeller shaft, and arms 5 and is located in the rear of the propeller 2 so as not to obstruct the flow thereto, and likewise to prevent rotation of the wake. As shown most clearly in Figure 4, the arms comprising the strut have a hydrofoil outline in cross section which results in reducing the resistance and in directing the flow from the propeller as well as obviating eddying and preventing rotation of the wake. By locating the strut in the rear of the propeller, it does not impede the flow of the water thereto and assists materially in directing the flow therefrom.

To enable the use of a relatively large propeller and to compensate in a measure for the inclination of the shaft 3, a guide plate 6 is carried by the strut and is disposed below the propeller and curves longitudinally and laterally, whereby to direct the flow from the propeller. Specifically this guide plate diverts the flow of water from an inclined direction to a horizontal direction and thereby increases the efficiency of propulsion. The guide plate extends forwardly of the strut so as to underlap the propeller and in the preferable construction, the guide plate is of hydrofoil outline in cross section. The invention is such as to be applied to craft of every nature impelled by means of a screw propeller, the purpose being to facilitate the flow to the propeller and direct the flow therefrom and to prevent eddying and rotation of the wake.

What is claimed is:

1. Water craft having a propeller disposed beneath its stern, a shaft for said propeller, a strut located in the rear of the propeller and constituting a bearing for said shaft, and said strut having arms substantially of hydrofoil outline whereby they will receive the water tangentially as it leaves the propeller and change the direction of flow to a direction straight astern,

said strut being arranged with but a single arm below said bearing, the latter arm being vertical with its axis intersecting the bearing.

5 2. Water craft having a propeller disposed beneath the stern, and means beneath the stern substantially of hydrofoil outline to receive the water tangentially as it leaves the propeller and change the direction of
10 flow to a direction straight astern, said means being provided with a single arm below said bearing, the arm being vertical with its axis intersecting the bearing.

3. Water craft having a propeller, and a
15 guide means associated therewith arranged to divert the flow of water therefrom from an inclined direction to horizontal direction to increase the efficiency of propulsion, said guide means having an arm extending be-
20 low and in vertical alinement with the bearing, and said arm at its lower end having a guide plate.

4. Water craft having a propeller disposed beneath the stern, a shaft for said
25 propeller, a strut located in the rear of the propeller having a hub constituting a bearing for the shaft, arms radiating from the hub, said arms being substantially of hydrofoil outline whereby they will receive the
30 water tangentially as it leaves the pro-

PELLER and change the direction of flow to a direction straight astern, said arms and hub being integral, and a guide plate integral with one of said arms arranged to direct the flow of water from an inclined direction
35 from the propeller to a horizontal direction to thereby increase the efficiency of propulsion.

5. Water craft having a propeller disposed beneath the stern, a shaft for said pro-
40 peller, a strut located in the rear of the propeller having a hub constituting a bearing for the shaft, arms radiating from the hub, said arms being substantially of hydrofoil outline whereby they will receive the water
45 tangentially as it leaves the propeller and change the direction of flow to a direction straight astern, said arms and hub being integral, and a guide plate integral with one of said arms arranged to direct the flow of
50 water from an inclined direction from the propeller to a horizontal direction to thereby increase the efficiency of propulsion, and said guide plate being substantially hori-
55 zontally disposed and extending on opposite side of the axis of said hub, and being curved both longitudinally and transversely.

In testimony whereof I affix my signature.

STEPHEN E. SLOCUM.