

H. WILLIN.  
STEERING AND PROPELLING DEVICE.  
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1,172,092.

Patented Feb. 15, 1916.

Fig. 1.

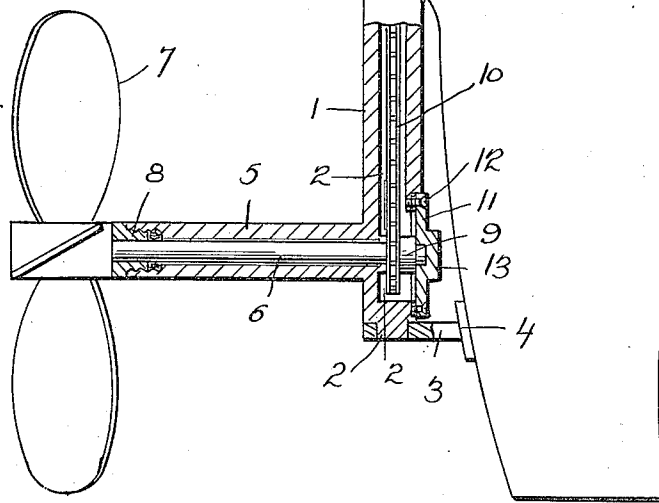
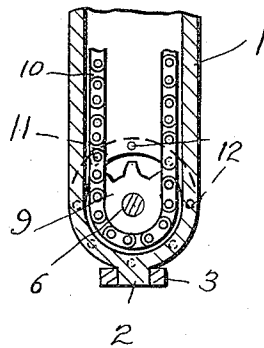


Fig. 2.



Witnesses

R. N. Jones  
Chas. R. Hume

Inventor

H. Willin.

By *A. Handreph*  
Attorney

# UNITED STATES PATENT OFFICE.

HERMAN WILLIN, OF NEW YORK, N. Y.

STEERING AND PROPELLING DEVICE.

1,172,092.

Specification of Letters Patent.

Patented Feb. 15, 1916.

Application filed October 29, 1913. Serial No. 797,969.

*To all whom it may concern:*

Be it known that I, HERMAN WILLIN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Steering and Propelling Devices; 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.

My invention relates to new and useful improvements in devices for propelling and steering boats and resides in the provision of such a device that may be readily installed in boats and operated to propel and steer the boats thus dispensing with the usual rudder for steering.

An important object of the invention is to provide a device such as above described which is light, strong and durable, consists of few parts, may be readily installed in boats and operated to efficiently steer and propel the boat and is cheap to manufacture.

The above and additional objects are accomplished by such means as are illustrated in the accompanying drawings, described in the following specification and then more particularly pointed out in the claim which is appended hereto and forms a part of this application.

With reference to the drawings, wherein I have illustrated the preferred embodiment of my invention as it is reduced to practice, and throughout the several views of which similar reference numerals designate corresponding parts: Figure 1 is a vertical sectional view illustrating my device as it would appear in assembled operative position, and Fig. 2 is a sectional view taken on line 2—2 of Fig. 1, particularly illustrating the sprocket wheel attached to the propeller shaft and operating chain connected therewith.

Coming now to the description of the drawings the numeral 1 represents as an entirety an approximately cylindrical tube that is formed of any suitable metal and mounted within the stern of a boat designated A as an entirety, after the same manner as is the usual rudder post. The tube 1 is disposed vertically within the stern of the boat after the manner described and any suitable means may be employed for rotatably securing it as may be necessary in the arrangement of the device. The lower terminal of the tube 1 is

provided with a projection or lug 2 that is adapted to seat within a bracket 3 which is suitably secured as at 4 to the adjacent part of the boat A. It will thus be seen that the tube 1 is rotatably supported at its lower terminal after the manner above described.

A cylindrical bearing sleeve 5 is formed integral with the tube 1 adjacent the lower terminal thereof and extends outwardly at right angles to the tube 1. A propeller shaft 6 is rotatably mounted within the bearing sleeve 5 and disposed so that its inner terminal is positioned within the tube 1. A suitable propeller 7 is keyed upon the outer terminal of the propeller shaft 6 and adapted to rotate therewith. A suitable stuffing box 8 is carried at the outer terminal of the bearing sleeve 5 for an obvious purpose.

A sprocket wheel 9 is keyed upon the inner terminal of the propeller shaft 6 and operates within the tube 1. A link driving chain 10 is operatively connected with the sprocket wheel 9 and disposed for rotation in a vertical plane within the tube 1. This chain 10 is connected in any suitable manner to the engine not shown and transmits power to the propeller shaft 6 consequently rotating the propeller 7 and affording desired propulsion for the boat.

As means for facilitating the assembling of the device there has been provided a detachable plate 11 carried adjacent the lower terminal of the tube and detachably secured to the tube by means of the screws 12. This plate 11 is enlarged centrally to provide a bearing 13 for the inner terminal of the propeller shaft 6 and when removed from the tube 1 provides for access to the interior of the tube 1 and thereby facilitates the ready assembling of the several parts of the device.

As hereinbefore stated the tube 1 is rotatably supported and suitable means not shown may be employed for rotating the tube and consequently the bearing sleeve 5, said means being operable from the deck or interior of the boat to which the device is applied.

It is apparent that when the propeller 7 is moved out of alinement with the longitudinal axis of the boat that the steering action for the boat is had.

The working parts of the device are completely incased within the tube and water is prevented from flowing to the interior of the tube by means of suitable packing interposing the tube and the detachable plate 11

and the stuffing box 8 carried at the outer terminal of the bearing sleeve 5.

In reduction to practice, I have found that the form of my invention, illustrated in the drawings and referred to in the above description, as the preferred embodiment, is the most efficient and practical; yet realizing that the conditions concurrent with the adoption of my device will necessarily vary, I desire to emphasize the fact that various minor changes in details of construction, proportion and arrangement of parts may be resorted to, when required, without sacrificing any of the advantages of my invention, as defined in the appended claim.

What is claimed is:—

In a steering and propelling mechanism for boats, a bracket carried by the boat, a vertically disposed tube having its lower end journaled in the bracket and its upper end journaled in a portion of the boat, said tube having a laterally projecting sleeve thereon adapted to receive the propeller

shaft and having an opening therein located at a point diametrically opposite the sleeve, the said opening being of a greater diameter than the sleeve, one end of the propeller shaft being adapted to extend into the tube and be positioned adjacent the said opening, operating mechanism extending into the tube and connected to the propeller shaft, flanges formed on the tube and projecting into the opening, a plate adapted to close the opening in the tube and engaging the flanges, means extending through the plate and the flanges for holding the plate in position, the said plate having a central bearing formed therein adapted to receive that end of the propeller shaft which extends into the tube.

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

HERMAN WILLIN.

Witnesses:

MICHAEL F. BOSWELL,  
HENRY J. BRINSLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."