(No Model.)

I. DAVID.

PROPELLING AND STEERING BOAT.

No. 414,298. Patented Nov. 5, 1889.

Fig. 1.

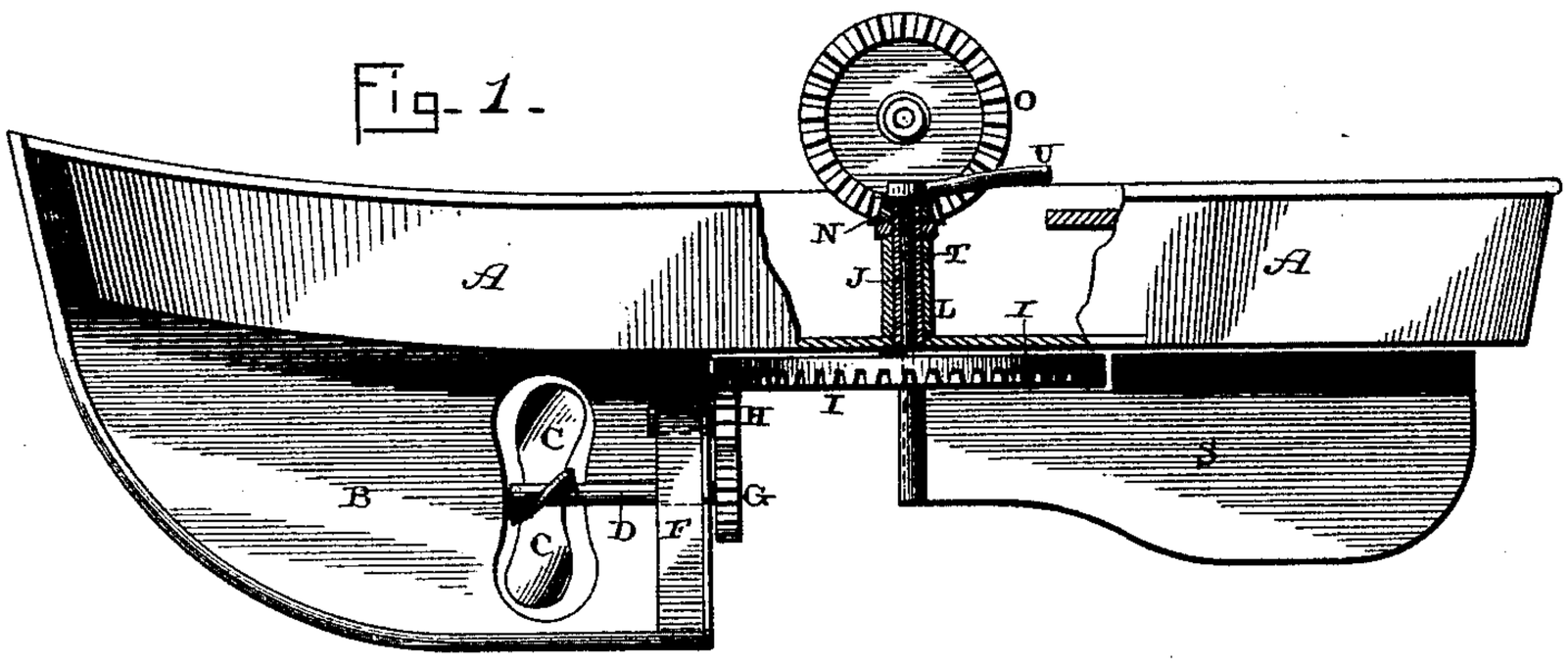


Fig. 2.

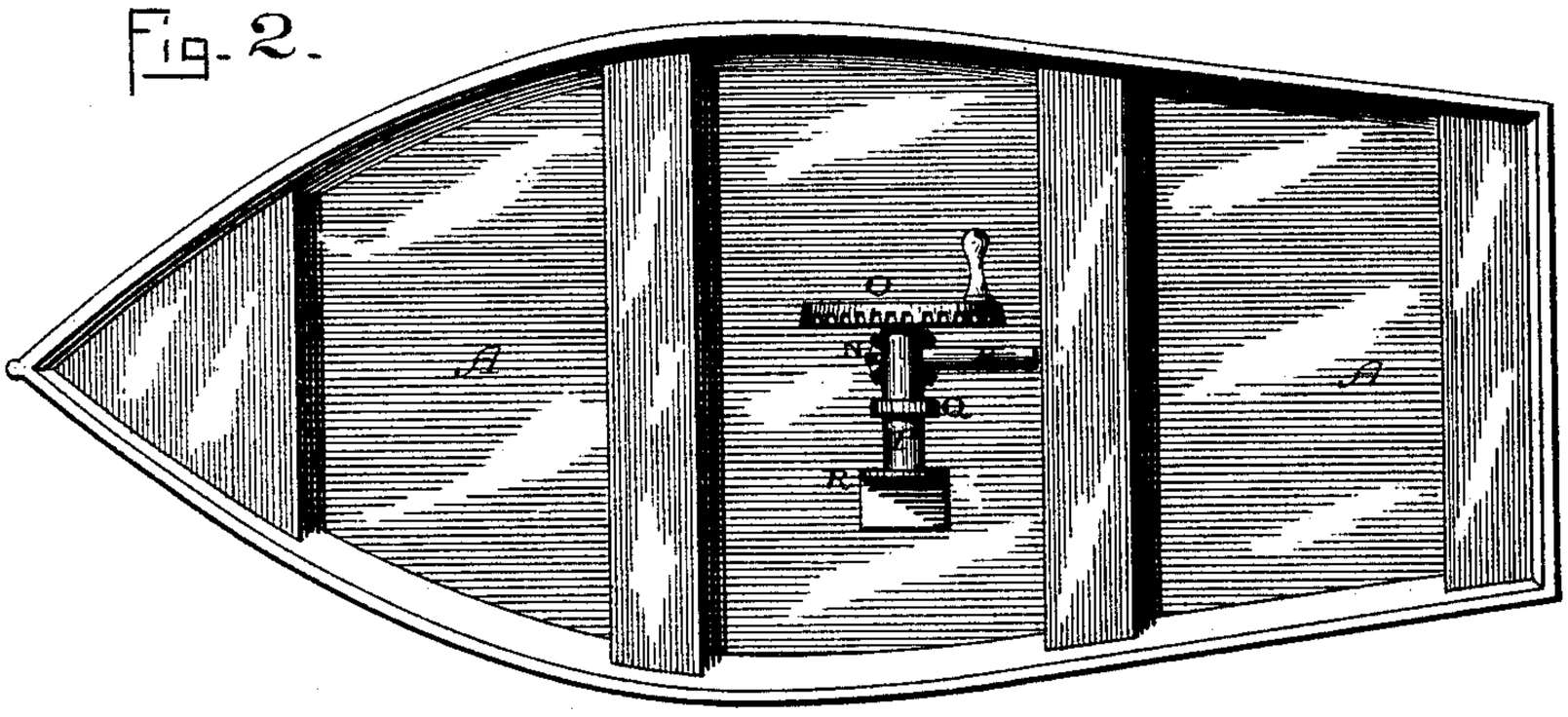
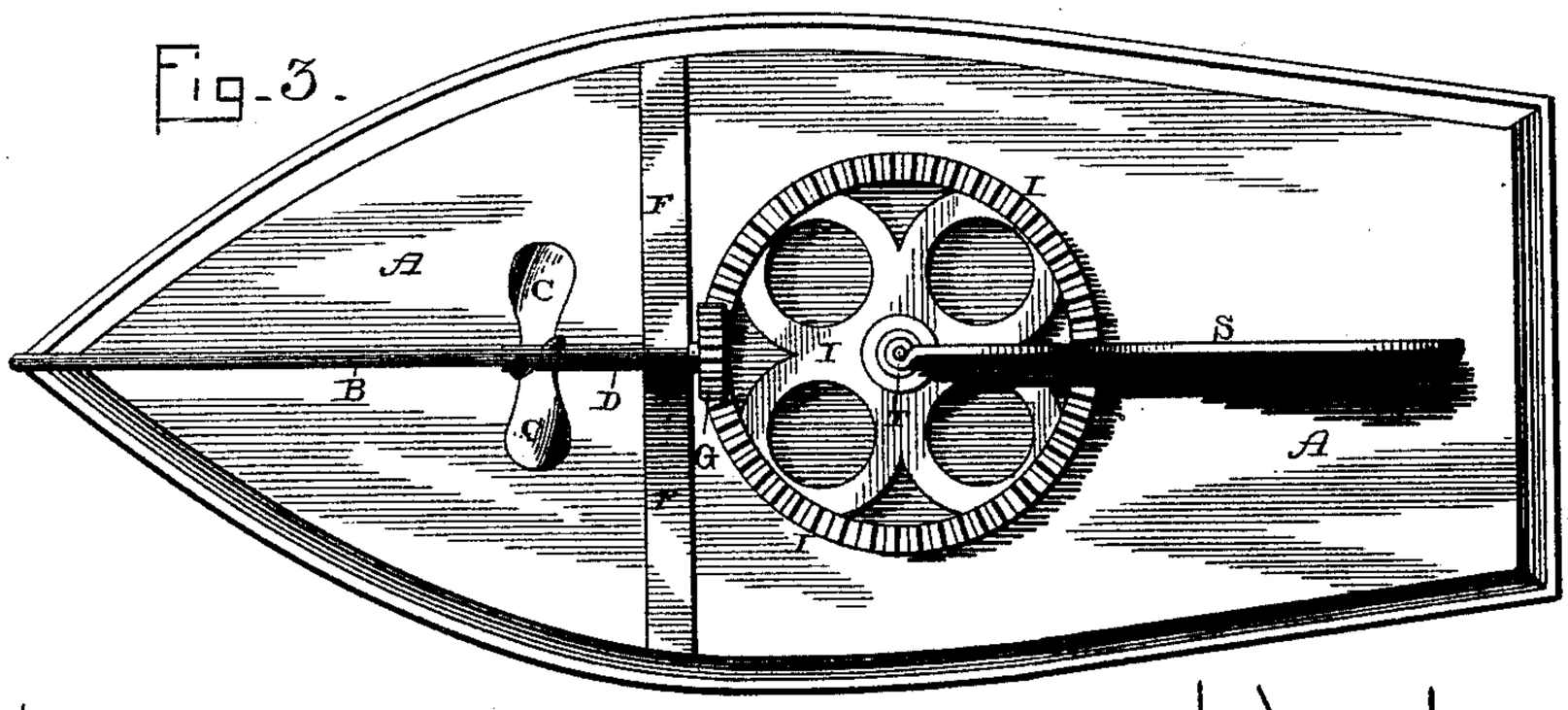


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PROPELLING AND STEERING BOATS.

SPECIFICATION forming part of Letters Patent No. 414,298, dated November 5, 1889.

Application filed July 22, 1889. Serial No. 318,283. (No model.)

To all whom it may concern:

Be it known that I, ISAAC DAVID, of Bladen, in the county of Webster and State of Nebraska, have invented certain new and useful Improvements in Boats; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in boats; and it consists in, first, the combination of the boat, a vertical flange or extension which projects downward from the bottom of the boat at its front end, the propeller and its operating-shaft, which are journaled in this flange, suitable operating-wheels, a driving-shaft which projects up through a sleeve or tube which projects above the bottom of the boat and is provided with a pinion at its upper end, and an operating-wheel, which is supported upon the sleeve, and by means of which the propeller is operated; second, in the arrangement and combination of parts, to be more fully described hereinafter and pointed out in the claims.

The object of my invention is to place the propeller-wheel in front of the central portion of the boat, and to place the rudder directly under the boat, and to have its post or rod to pass up into the boat at the same point where the operating-power is applied to the driving-shaft of the propeller, so that a person can drive the boat with one hand and steer with the other.

Figure 1 is a side elevation of a boat partly in section, and to which my invention is applied. Fig. 2 is a plan view. Fig 3 is an inverted view.

A represents a boat of suitable length and width, and which is preferably provided with a flat bottom. Extending downward under the bow of the boat is a vertical flange B, having an opening through it near its rear end to receive the propeller-wheel C, and which flange forms a bearing or support for the shaft D, to which the propeller-wheel is secured. This flange serves as a means for keeping the boat in a straight line and prevents it from too readily turning to one side or the other, as it would be liable to do were the flange not used. The rear end of this vertical flange B is preferably braced in position by the braces F.

Secured to the rear end of the propeller-shaft D is a pinion G, which meshes with the idler-pinion H, which is also journaled upon the rear edge of the flange B, and which idler-pinion meshes with a large driving-wheel I, which is placed directly under the bottom of the boat. This large wheel I is secured to the tubular driving-shaft J, which passes vertically through the sleeve L, which rises from the bottom of the boat any suitable distance upward. Secured to the upper end of the tubular shaft J is a pinion N, which meshes with and is operated by the driving-wheel O, which has its shaft to pass through the horizontal sleeve or bearing P, which is secured to the upper end of the vertical support Q, which is pivoted upon the tubular shaft and between the upper end of the sleeve and the pinion. The shaft of the wheel O extends entirely through the sleeve P, and the projecting end of the shaft is provided with a bearing R, which rises directly from the bottom of the boat.

The wheel O is provided with a crank or handle, by means of which the wheel may be made to revolve, and thus give motion to the other wheels of the propeller and cause the boat to move either forward or back, as may be desired.

The rudder S is of any suitable length and width, and has its post T to project up through the tubular driving-shaft, and to the upper end of this post T is secured an operating-lever U, just above the top of the pinion N. This lever U being placed by the side of the wheel O, the operator, sitting upon one of the seats of the boat, has only to turn the wheel with one hand and operate the lever U with the other, and he can drive the boat either forward or back and steer at the same time.

Having thus described my invention, I claim—

1. The combination of the boat, the flange B, secured under its front end, the propeller C and shaft D, journaled in or upon this flange, the wheels G H I, the operating-shaft

provided with a pinion upon its upper end, and the driving-wheel O, substantially as shown.

2. The combination, with a boat having an opening in its bottom and a vertical sleeve, of the propeller, a hollow operating-shaft which passes through the sleeve, a horizontal operating-gear secured to the hollow shaft below the bottom of the boat, a rudder-post which passes through the said hollow shaft, a handle attached to the upper end of the post, and a rudder to its lower end, substantially as described.

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

ISAAC DAVID.

Witnesses:
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