

A. J. EMMONS.

Mechanisms for Propelling and Steering Boats.

No. 155,229.

Patented Sept. 22, 1874.

Fig: 1.

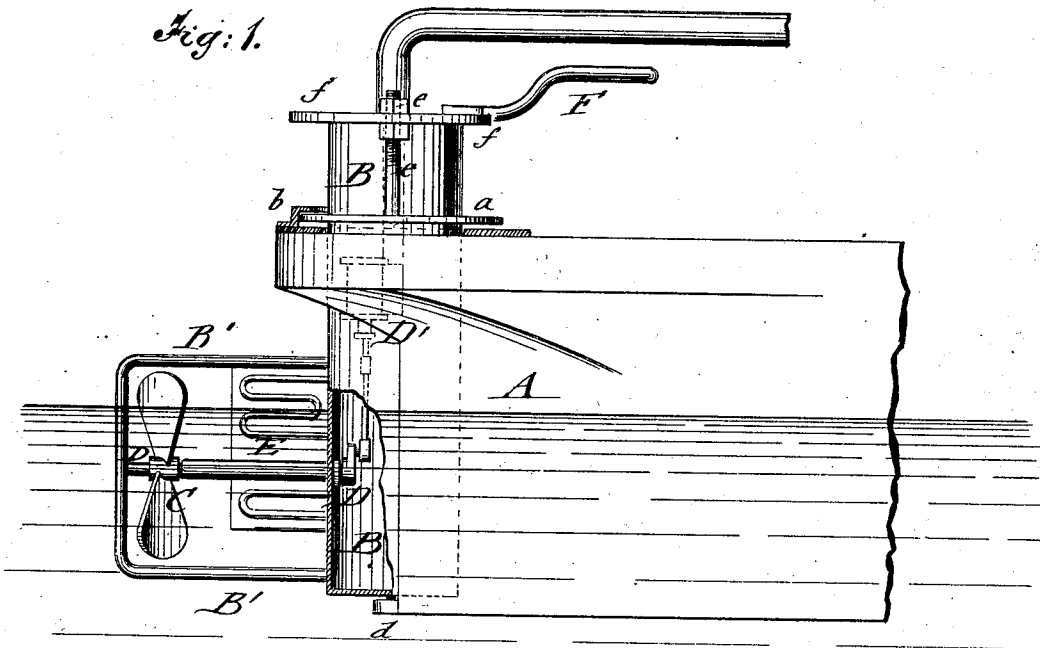
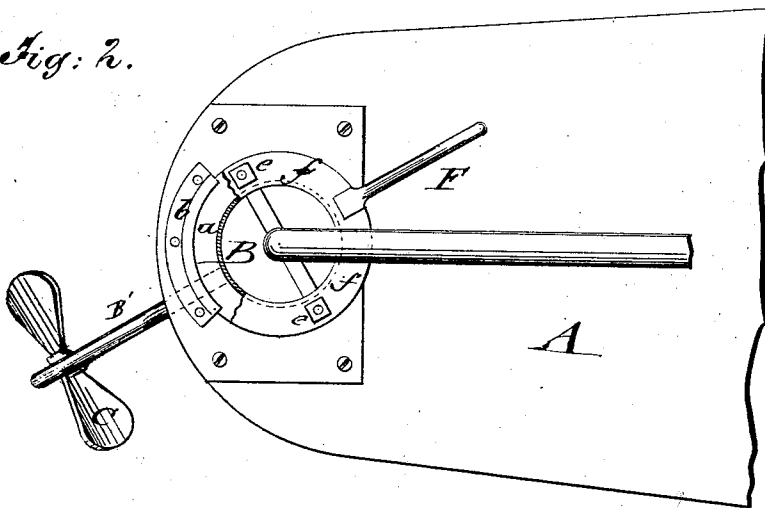


Fig: 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MECHANISMS FOR PROPELLING AND STEERING BOATS.

Specification forming part of Letters Patent No. **155,229**, dated September 22, 1874; application filed August 15, 1874.

To all whom it may concern:

Be it known that I, ANDREW J. EMMONS, of the city, county, and State of New York, have invented a new and Improved Mode of Propelling Boats, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of a boat, showing mode of propulsion; and Fig. 2, a top view of the same.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide an improved mode of propelling boats, by which the machinery is greatly simplified and conveniently arranged, and the screw be used also for steering purposes.

My invention consists of a vertically-adjustable cylindrical compartment at the stern of the boat, which is rotated by a lever or tiller, and provided with a steam-cylinder for rotating the screw-shaft, supported in bearings connected to the compartment.

In the drawing, A represents the boat; B, a cylindrical water-tight compartment or chamber, which turns freely in a guide-recess of the stern, being supported by a circular flange, *a*, in guide-plates *b* at the upper part, and on a central pivot, *d*, at the bottom end. The guide-flange *a* may be adjusted vertically along compartment B by means of vertical screw bolts and check-nuts *e*, which connect the same with the stationary top supporting-flange *f* of the compartment. The whole compartment, and with it the screw C, may thereby be readily lowered or raised, according to the depth of water. The lower pivoted part is secured to the stern by a chain or rope passing over pulleys to the deck of the vessel, the chain being adjusted according to the position of the compartment, or in other suitable manner. A strong rectangular supporting-frame, B', is firmly attached to compartment B, and serves to support, in suitable bearings, the screw-shaft D. The screw-shaft D is rotated by

means of a common or oscillating steam-cylinder, D', placed within the compartment, a steam-conducting pipe connecting the same, through the upper part of the compartment, to the generating-boiler at some suitable part of the boat. A condenser, E, is placed within frame B', which is considerably strengthened thereby. A lever or tiller, F, is firmly secured to the top part of compartment B, for steering the boat by revolving compartment and screw-shaft.

The lever may be geared in any suitable manner, and the boat jointly propelled and steered by means of the screw.

For entering locks or for other purposes the compartment may be turned under a full right angle from its exact position, and thereby the screw carried to one side, being protected against injury in this position.

The expensive screw-shaft is not only considerably shortened, but also a compact and convenient engine construction obtained, which takes up small space, and forms thereby a desideratum for canal-boats.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improvement in propelling boats, the combination, with a boat, of a revolving cylindrical compartment, provided with supporting-frame for screw-shaft, rotated by a steam-cylinder within the compartment, for the purpose of jointly propelling and steering the boat by the screw, substantially as set forth.

2. The combination of revolving compartment, having sliding supporting-flange and screw-bolts, with guide-plates and base-pivot for adjusting compartment and screw to greater or less depth, substantially as and for the purpose specified.

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Witnesses:

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