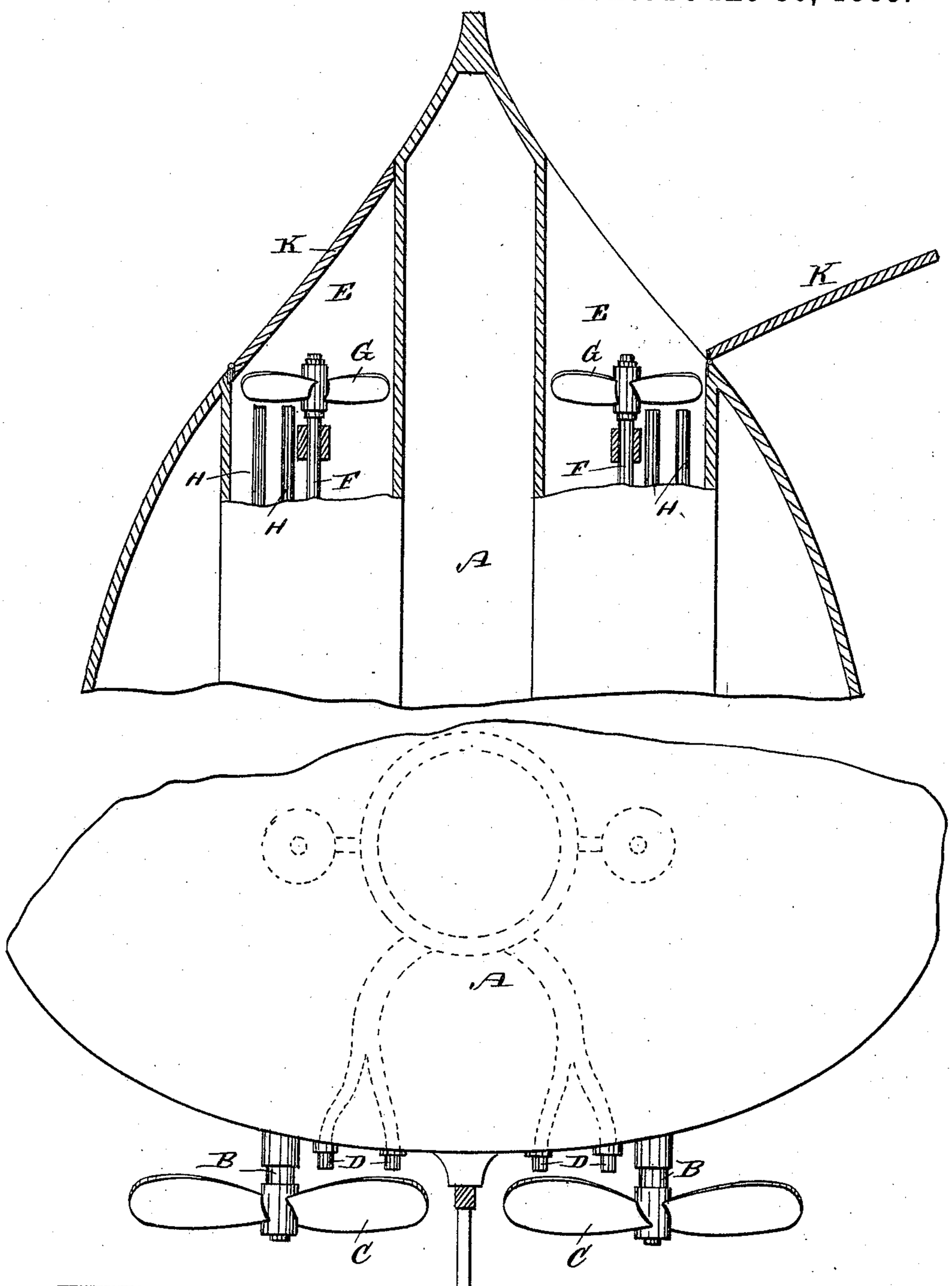
(No Model.)

W. O. ROBBINS.

PROPELLING MARINE VESSELS.

No. 321,138. Patented June 30, 1885.



WITNESSES:

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PROPELLING MARINE VESSELS.

SPECIFICATION forming part of Letters Patent No. 321,138, dated June 30, 1885.

Application filed June 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. ROBBINS, of the city, county, and State of New York, have invented a new and useful Improvement in Propelling Marine Vessels, of which the following is a full, clear, and exact description.

The object of my invention is to provide certain new and useful improvements in propelling vessels whereby the long propeller-shafts are avoided, the power is utilized to greater advantage, and the vessel can be stopped very quickly.

The invention consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawing, forming part of this specification, in which a plan view of a vessel provided with my improvements is shown, parts being broken out and others, shown in section.

From the stern of the vessel A the two horizontal propeller-shafts B project, and on each of the same a propeller screw or wheel, C, is rigidly or loosely mounted.

Adjacent to each propeller one or more pipes, D, project from the stern, the ends of the pipes being close to the blades of the propeller. The pipes D lead to an air compressing and forcing apparatus in the vessel, and from the vessel air under a very high pressure is forced against the blades of the propeller, whereby the propellers are revolved and propel the ship forward. As the propeller-shafts are short, the danger of breakage of the same is almost entirely removed. As the enormous friction of the long propeller-shafts is avoided, more power can be utilized in propelling the vessel.

I have shown twin screws, which construction is preferred; but I may use but a single screw, if desired.

In the bow of the vessel two compartments, E, are formed, which have doors K, hinged on the outer edges of the openings to swing laterally, and are held closed by the pressure of the water on the bow. In each compartment E a propeller-shaft F is arranged, on the outer or front end of each of which a screw, G, is mounted, and one or more pipes, H, are provided in each compartment, which pipes are also connected with the air compressing and forcing apparatus.

If the vessel is to be stopped, cocks which are arranged in the pipes H are opened to permit the compressed air to act on the screws G. The compressed air accumulating in the compartments E forces the doors K outward, as shown on the right-hand side of the drawing, so that water can pass into the compartments. The screws G stop the vessel, as they have the tendency to move it backward, and when the vessel has come to a standstill the screws G move the vessel backward. By operating only one screw G the vessel can be steered very easily without requiring the use of a rudder.

By the backward movement of the vessel the doors K are brought in a position parallel with the longitudinal axis of the vessel, and by moving the vessel forward the doors are closed automatically.

If desired, steam can be used in place of compressed air.

Instead of compressed air and steam, water may be forced through the pipes by a suitable force-pump.

I am aware that it is not broadly new to revolve propeller-wheels by the direct action of steam or water, and therefore do not claim such invention.

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

1. The combination, with a vessel provided with the shafts B, projecting from the stern and carrying propeller-wheels C, of the air-pipes D, leading from an air condensing or forcing apparatus and projecting from the stern parallel with the propeller-shaft, and extending into close proximity to the blades of the wheel, substantially as herein shown and described, whereby currents of air may be delivered upon the blades of the wheel for revolving the same, and provision made for using short propeller-shafts, thereby lessening danger of breaking and reducing the friction, as set forth.

2. The combination, with a vessel provided with the compartments E in the bow, of shaft F, arranged in said compartments and carrying propeller-wheels G on the ends, and air-

pipes H, projecting into the compartments and into close proximity to the propeller-wheels, substantially as herein shown and described, whereby provision is made for stopping and turning the vessel, as set forth.

3. A vessel provided with the compartments E in its bow, having hinged doors K, in combination with propeller-wheels arranged in said compartments, and air-pipes projecting into close proximity to the propeller-wheels, substantially as herein shown and described, whereby the doors will be automatically opened and closed, as and for the purpose set forth.

WM. O. ROBBINS.

Witnesses:
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